

ESSAY
ON THE ORIGIN
OF
LANGUAGES
IN WHICH
SOMETHING IS SAID ABOUT MELODY
AND
MUSICAL IMITATION

BY

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CHAPTER ONE

OF THE VARIOUS MEANS OF COMMUNICATING OUR THOUGHTS

[1] Speech differentiates man from the other animals: language differentiates one nation from another; where a man is from is known only once he has spoken. Usage and need cause everyone to learn the language of his country; but what makes this be the language of his country and not of another? In order to tell, one has to go back to some cause that depends on locality and antedates even morals: since speech is the first social institution, it owes its form to natural causes alone.

[2] As soon as one man was recognized by another as a sentient, thinking Being, similar to himself, the desire or the need to communicate to him his sentiments and thoughts made him seek the means to do so. These means can only be drawn from the senses, the only instruments by which one man can act upon another. Hence the institution of sensible signs to express thought. The inventors of language did not make this argument, but instinct suggested its conclusion to them.

[3] The two general means we have of acting on someone else's senses are restricted to two, namely movement and the voice. Movement acts immediately through touch or mediately through gesture; since the first reaches no farther than arm's length, it cannot communicate at a distance, but the other extends as far as does the field of vision. Thus only sight and hearing are left as the passive organs of language among men dispersed. [376]

[4] Although the language of gesture and that of the voice are equally natural, the first is easier and less dependent on conventions: for more objects strike our eyes than our ears, and shapes exhibit greater variety than do sounds; they are also more expressive and say more in less time. Love, it is said, was the inventor of drawing. It might also have invented speech, though less felicitously; Dissatisfied with speech, love disdains it, it has livelier ways of expressing itself. How many things the girl who took such pleasure in tracing her Lover's shadow was telling him! What sounds could she have used to convey what she conveyed with this movement of the twig?

[5] Our gestures signify nothing but our natural restlessness; they are not the ones about which I wish to speak. Only Europeans gesticulate while speaking: One would think that the force of their speech resided entirely in their arms; to which they further add the force of their lungs, and all to scarcely any avail. After a Frenchman has huffed and puffed and gone through all kinds of bodily contortions to deliver himself of long speeches, a Turk takes his pipe from his mouth for a moment, quietly says two words, and crushes him with a single pithy saying.

[6] Ever since we learned to gesticulate we forgot the art of pantomime, for the same reason that with so many fancy grammars we no longer understand the symbols of the Egyptians. What the ancients said in the liveliest way they expressed not in words but in signs; they did not say it, they showed it.

[7] Consult ancient history; you will find it filled with such ways of addressing arguments to the eyes, and they never fail to produce a more certain effect than all the discourses that might have been put in their place. The object presented before anything is said stimulates the imagination, arouses curiosity, holds the mind in suspense and anticipation of what will be said. I have noticed that Italians and people from Provence, with whom gesture usually precedes speech, manage in this way to get themselves listened to more attentively and even with greater pleasure. But the most energetic speech is that in which the sign has said everything before a single word is spoken. Tarquin, Thrasybulus lopping off the heads of the poppies, Alexander putting his ring to his favorite's mouth, Diogenes walking in front of Zeno, did they not speak more effectively than with words? What circumlocutions would have expressed the same ideas equally well? Darius [377] waging war in Scythia receives from the King of the Scythians a frog, a bird, a mouse, and five arrows: the Herald transmits his gift in silence and departs. This terrible harangue was understood, and Darius found nothing more urgent than to get back to his country as best he could. Substitute a letter for these signs, the more it threatens the less it frightens; it is mere bluster at which Darius would simply have laughed.

[8] When the Levite of Ephraim wanted to avenge the death of his wife, he did not write to the Tribes of Israel; he divided her body into twelve pieces which he sent to them. At this ghastly sight

they rushed to arms crying with one voice: *no, never has anything like this happened in Israel, from the day when our fathers left Egypt until this day!* And the Tribe of Benjamin was exterminated.* Nowadays it would have been turned into lawsuits, debates, perhaps even jokes, it would have dragged on, and the most ghastly crime would finally have gone unpunished. King Saul returning from the fields in like fashion dismembered his plow oxen and used a similar sign to rouse Israel to assist the city of Jabesh. The Jews' Prophets and the Greeks' Lawgivers who frequently presented visible objects to the people spoke to them better with these objects than they would have done with long discourses, and the way in which, according to Athenaeus, the orator Hyperides got the courtesan Phryne acquitted without urging a single word in her defense, is yet another instance of a mute eloquence that has at all times proven effective.

[9] Thus one speaks much better to the eyes than to the ears: no one fails to feel the truth of Horace's judgment in this regard. The most eloquent discourses are even seen to be those with the most images embedded in them, and sounds are never more energetic than when they produce the effect of colors.

[10] However when it is a question of moving the heart and inflaming the passions, it is an entirely different matter. The successive impression made by discourse, striking with cumulative impact, succeeds in arousing in you a different emotion than does the presence of the object itself which you take in all at one glance. Suppose a situation of perfectly well-known pain, [378] you will not easily be moved to tears at the sight of the afflicted person; but give him the time to tell you everything he feels and you will soon burst out in tears. Only thus do the scenes of tragedy produce their effect.* Pantomime alone unaccompanied by discourse will leave you almost unmoved; Discourse unaccompanied by gesture will wring tears from you. The passions have their gestures, but they also have their accents, and these accents, which cause us to shudder, these accents to which one cannot close one's ear and which

* Only six hundred of its men, and no women or children, were left.

* I have said elsewhere why feigned miseries affect us more than do genuine ones. There are people who sob at tragedies but never in their lives took pity on a single unhappy person. The invention of the theater is marvelously suited to make our amour propre feel proud of all the virtues we do not have.

by way of it penetrate to the very depths of the heart, in spite of ourselves convey to it the [e]motions that wring them [from us], and cause us to feel what we hear. Let us conclude that visible signs make for more accurate imitation, but that interest is more effectively aroused by sounds.

[11] This leads me to think that if we had never had any but physical needs, we might very well never have spoken and [yet] have understood one another perfectly by means of the language of gesture alone. We might have established societies differing but little from what they are now, or which might even have pursued their end better: we might have instituted laws, chosen chiefs, invented arts, established commerce and, in a word, done almost as many things as we are doing with the help of speech. The epistolary language of salaams* relays the secrets of oriental gallantry from one end to the other of the best-guarded Harems without fear of jealous [masters]. The mutes of the Grand Vizier understand one another and they understand everything they are told by means of signs, just as well as it can be told in discourse. M. Pereyre and those who like himself teach mutes not only to speak but to know what they are saying are, after all, forced first to teach them another no less complicated language, by means of which to enable them to understand that one.

[12] Chardin says that in India traders take one another by the hand and by varying their grip in [379] ways no one can see transact all their business in public and yet secretly without having exchanged a single word. Assume these traders to be blind, deaf, and mute, they would understand one another no less well; which shows that in order to form a language for ourselves, a single one of the two senses by which we are active would suffice.

[13] It would also seem from these observations that the invention of the art of communicating our ideas is a function not so much of the organs we use in such communication as of a faculty peculiar to man, which causes him to use his organs for this purpose and which, if he lacked them, would cause him to use others to the same end. Let man be as crudely structured as you please: no doubt he will acquire fewer ideas; but provided only that there is some

* Salaams are any number of the most common objects, such as an orange, a ribbon, a piece of coal, etc., the sending of which conveys a meaning known to all lovers in the country where this language has currency.

means of communication between himself and his kind by which one man can act and the other sense, they will succeed in eventually communicating to one another all the ideas they have.

[14] Animals have a structure more than adequate for this kind of communication, yet none of them has ever put it to this use. Here, it seems to me, is a most distinctive difference. Those among them that work and live together, Beavers, ants, bees, have some natural language for communicating with one another, I have no doubt about it. There is even reason to believe that the language of Beavers and that of ants is gestural and speaks only to the eyes. Be that as it may, precisely because these various languages are natural, they are not acquired; the animals that speak them have them at birth, they all have them, and everywhere they have the same one: they do not change languages, nor do they make any progress whatsoever in them. Conventional language belongs to man alone. This is why man makes progress in good as well as in evil, and why animals do not. This single distinction seems to be far-reaching: they say that it can be explained by the difference in organs. I should be curious to see this explanation.

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CHAPTER TWO

THAT THE FIRST INVENTION OF SPEECH IS DUE NOT TO THE NEEDS BUT TO THE PASSIONS

[1] It would seem then that the needs dictated the first gestures and the passions wrung the first voices [*voix*]. Following the track of the facts in the light of these distinctions, the origin of languages should perhaps be thought about altogether differently from the way in which it has been thought about until now. The genius of the oriental languages, the oldest ones known to us, completely contradicts the didactic development their composition is imagined to have followed. There is nothing methodical or reasoned about these languages; they are lively and figurative. The speech of the

first men is made out to us to have been languages of Geometers, whereas we see that they were languages of Poets.

[2] It had to be so. Man did not begin by reasoning but by feeling. It is claimed that men invented speech in order to express their needs; this seems to me an untenable opinion. The natural effect of the first needs was to separate men and not to bring them together. This is how it had to be for the species to spread and the earth to be promptly populated; otherwise mankind would have crowded into one corner of the world, while all the rest remained desert.

[3] From this alone it clearly follows that the origin of languages is not due to men's first needs; it would be absurd for the cause of their separation to give rise to the means that unites them. To what may this origin then be due? To the moral needs, the passions. All the passions bring together men whom the necessity to seek their subsistence forces to flee one another. Not hunger nor thirst, but love, hatred, pity, anger wrung their first voices from them. Fruit does not shrink from our grasp, one can eat it without speaking, one stalks the prey one means to devour in silence; but in order to move a young heart, to repulse an unjust aggressor, nature dictates accents, cries, complaints: [381] here [then] are the oldest invented words, and here is why languages were songlike and passionate before they were plain and methodical. None of this is true without qualification, but I shall come back to it in the sequel.

CHAPTER THREE

THAT THE FIRST LANGUAGE MUST HAVE BEEN FIGURATIVE

[1] Just as the first motives that made man speak were passions, his first expressions were Tropes. Figurative language arose first, proper [or literal] meaning was found last. Things were called by their true name only once they were seen in their genuine form. At first men spoke only poetry; only much later did it occur to anyone to reason.

[2] Now I sense the reader stopping me here, and asking how an expression can be figurative before it has a proper [or literal] meaning, since the figure consists solely in the transposing of meaning. I grant this; but in order to understand me, it is necessary to substitute the idea which the passion presents to us for the word which we are transposing; for words are transposed only because ideas also are, otherwise figurative language would signify nothing. I therefore reply with an example.

[3] A savage meeting others will at first have been frightened. His fright will have made him see these men as larger and stronger than himself; he will have called them *Giants*. After much experience he will have recognized that since these supposed Giants are neither bigger nor stronger than he, their stature did not fit the idea he had initially attached to the word Giant. He will therefore invent another name common both to them and to himself, for example the name *man*, and he will restrict the name *Giant* to the false object that had struck him during his illusion. This is how the figurative word arises before the proper [or literal] word does, when passion holds our eyes spellbound and the first idea which it presents to us is not that of the truth. What I have said regarding words and names applies equally [382] to turns of phrase. Since the illusory image presented by passion showed itself first, the language answering to it was invented first; subsequently it became metaphorical when the enlightened mind recognized its original error and came to use expressions of that first language only when moved by the same passions as had produced it.

CHAPTER FOUR

OF THE DISTINCTIVE CHARACTERISTICS OF THE FIRST LANGUAGE AND OF THE CHANGES IT MUST HAVE UNDERGONE

[1] Simple sounds issue naturally from the throat, the mouth is naturally more or less open; but the modifications of tongue and

palate by which we articulate require attention, practice, one does not make them without intending to make them, all children must learn them and some do not do so easily. In all languages the liveliest exclamations are inarticulate; cries, moans are simple voices; mutes, that is to say the deaf, utter only inarticulate sounds. Father Lamy cannot even conceive how men could ever have invented any others if God had not expressly taught them to speak. Articulations are few in number, sounds are infinite in number, the accents placed on them can similarly be multiplied; all musical notes are so many accents; it is true that our speech has only three or four, but the Chinese have many more; on the other hand they have fewer consonants. To this source of combinations add that of meter or quantity, and you will have a greater variety not only of words, but of differentiated syllables than the richest language needs.

[2] I do not doubt that if it still existed, the first language would have preserved certain original characteristics besides vocabulary and syntax which would distinguish it from all other languages. Not only would all the turns of phrase [383] in this language have to be in images, sentiments, figures; but in its mechanical aspect it would have to answer to its primary aim, and convey to the ear as well as to the understanding the almost inescapable impressions of passion seeking to communicate itself.

[3] Since our natural voices are inarticulate, words would have few articulations; a few interspersed consonants eliminating the hiatus between vowels would suffice to make them fluid and easy to pronounce. On the other hand its sounds would be extremely varied, and variety of accent would multiply the same voices; Quantity, rhythm would make possible still further combinations; so that since voices, sounds, accent, quantity, which are by nature, would leave little to be done by articulations, which are by convention, men would sing rather than speak; most root words would be sounds imitating either the accent of the passions, or the effect of sensible objects: onomatopoeia would be felt in them constantly.

[4] This language would have many synonyms to describe the same being in its different relations;* it would have few adverbs and abstract words to express these relations. It would have many

* Arabic is said to have more than a thousand different words for *camel*, more than a hundred to say a *sword*. Etc.

augmentatives, diminutives, compound words, expletive particles, to endow periods with cadence and sentences with fullness; It would have many irregularities and anomalies, it would neglect grammatical analogy in favor of the euphony, variety, harmony and beauty of sounds; instead of arguments it would have pithy sayings, it would persuade without convincing and depict without arguing; in some respects it would resemble Chinese, in others Greek, in still others Arabic. Develop these ideas in all their ramifications, and you will find that Plato's *Cratylus* is not as ridiculous as it appears to be.

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CHAPTER FIVE OF WRITING

[1] Anyone who studies the history and progress of languages will see that the more voices grow monotone the more do consonants increase in number, and that as accents disappear and quantities are equalized, they are replaced by grammatical combinations and new articulations: but these changes take place only gradually. In proportion as needs increase, as [men's] dealings get more entangled, as enlightenment spreads, language changes in character; it becomes more precise and less passionate; it substitutes ideas for sentiments, it no longer speaks to the heart but to the reason. As a result accent dies out, articulation spreads, language becomes more exact, clearer, but more sluggish, more muted and colder. This progress seems to me entirely natural.

[2] Another means of comparing languages and to tell how ancient they are is taken from writing, namely in inverse proportion to the perfection of this art. The cruder the writing, the more ancient the language. The first way of writing is not to depict sounds but the objects themselves, either directly as did the Mexicans, or by allegorical figures, as the Egyptians formerly did. This state corresponds to passionate language, and it already presupposes some social life and needs engendered by the passions.

[3] The second way is to represent words and propositions by conventional characters; which is possible only once the language

is fully formed and an entire people is united by shared Laws; for this already involves a twofold convention. Such is the writing of the Chinese; this is genuinely to depict sounds and to speak to the eyes.

[4] The third is to break up the speaking voice into a number of elementary parts, either vocal or articulated, by means of which all imaginable words and syllables could be formed. This way of writing, [385] which is ours, must have been imagined by peoples engaged in commerce who, since they traveled in various countries and had to speak various languages, were forced to invent characters that could be common to all of them. To do this is not exactly to depict speech, it is to analyze it.

[5] These three ways of writing correspond fairly precisely to the three different states in terms of which one can consider men assembled into nations. The depiction of objects suits savage peoples; signs of words and propositions, barbarian peoples, and the alphabet, civilized peoples.

[6] This last-mentioned invention ought therefore not to be regarded as a proof of the great antiquity of the people that invented it. On the contrary, it is likely that the people that found it had in view easier communication with other peoples speaking other languages, that were at least its contemporaries and could have been more ancient than it. The same cannot be said of the two other methods. However, I admit that if we keep to history and the known facts, alphabetical writing appears to go as far back as any other. But it is not surprising that we lack records of times when people did not write.

[7] It is scarcely likely that those to whom it first occurred to analyze speech into elementary signs initially made very precise divisions. Later, when they perceived the inadequacy of their analysis, some increased the number of letters in their alphabet, as did the Greeks, the others left it at varying the meaning or the sound of letters by placing or combining them differently. This is how the inscriptions on the ruins of Tchelminar which Chardin has transcribed for us appear to have been written. They exhibit only two shapes or characters* which, however, differ in size and face in

* *People are surprised, says Chardin, that two shapes can make up so many letters, but I see nothing so very astonishing in this, since the letters of our Alphabet, which are twenty-three in number, are nevertheless made up of only two lines, the straight*

different directions. Yet, to judge by the perfection of the arts which the beauty of the charac[386]ters indicates,** and by the admirable monuments on which these inscriptions are found, this unknown and almost frighteningly ancient language must have been well developed at the time. I do not know why these astonishing ruins are talked about so little: when I read their description in Chardin, I feel transported to another world. All of this strikes me as intensely thought-provoking.

[8] The art of writing does not in any way depend on that of speaking. It depends on needs of a different nature which arise sooner or later depending on circumstances that are altogether independent of how long a people has been in existence, and that might never have taken place in very ancient Nations. It is not known for how many centuries the art of hieroglyph was perhaps the Egyptians' only writing, and the fact that a civilized people may find such writing adequate is proven by the example of the Mexicans, whose writing was even less convenient.

[9] When the Coptic Alphabet is compared with the Syriac or the Phoenician alphabet it is readily evident that one derives from the other, and it would not be surprising if the latter were the original, nor if the more recent people had instructed the more ancient in this respect. It is also clear that the Greek Alphabet derives from the Phoenician; indeed, it is evident that it must derive from it. Regardless of whether Cadmus or someone else brought it

and the curved, that is to say, that with a C and an I one makes up all the letters that compose our words.

*** This character is very beautiful in appearance, with nothing unclear or barbarous about it . . . It would seem that the letters were gilded; for several, especially capitals, still show some gold, and it is surely admirable and astounding that the air should not have succeeded in eroding this gilding in all these centuries . . . However it is not at all surprising that not a single one of the world's scholars has ever made any sense of this writing, for it in no way resembles any writing that has come down to us; whereas all the systems of writing now known, except the Chinese, exhibit many affinities with one another and appear to derive from the same source. What is most astonishing about all this is that the Parsees, who are the descendants of the ancient Persians and who preserve and perpetuate their religion, not only are no more familiar with these characters than we are, but that their own characters no more resemble them than do ours . . . From which it follows that either it is a cabalistic character – which is unlikely, since it is used routinely and naturally everywhere throughout the building, and there is none other by the same chisel – or that it is of an antiquity so great that we hardly dare state it. Indeed, Chardin would lead one to infer from this passage that at the time of Cyrus and of the Magi this character was already forgotten and as unknown as it is today.*

over from Phoenicia, it seems certain in any case that the Greeks did not set out in quest of it but that the Phoenicians brought it over themselves: for they were the first and almost the only one of the Asian or African Peoples* to engage in trade with Europe and they came to the Greeks long before the Greeks visited them: Which in no way proves [387] that the Greek People is less ancient than the Phoenician.

[10] At first the Greeks not only took over the Phoenicians' characters, but even the direction of their lines from right to left. Later it occurred to them to write in furrows, that is to say by returning alternately from left to right and from right to left.* Finally they wrote as we do now, beginning every line anew from left to right. This progress is altogether natural: Writing in furrows is unquestionably the easiest to read. I am even surprised that it was not adopted along with printing, but since writing this way by hand is difficult, it must have fallen into disuse when manuscripts became more numerous.

[11] But even though the Greek alphabet derives from the Phoenician alphabet it by no means follows that the Greek language derives from the Phoenician language. One of these propositions does not entail the other, and it would appear that the Greek language was already very ancient, when the art of writing was still recent and even imperfectly developed among the Greeks. Until the siege of Troy they had only sixteen letters, if they had that many. It is said that Palamedes added four and Simonides the remaining four. All this is rather far-fetched. On the other hand, Latin, a more modern language, had a complete alphabet almost from its birth, though the first Romans hardly made use of it, since they began to write down their history so late, and lustra were only marked off with nail[-head]s.

[12] Besides, there is no absolutely fixed number of letters or of elements of speech; some have more, some fewer, depending on the language and on the various modifications accorded to vowels [*voix*] and consonants. Those who recognize only five vowels are seriously mistaken: the Greeks had seven written vowels, the first Romans

* I take the Carthaginians to be Phoenicians, since they were a colony of Tyre.

* See Pausanias, *Arcad[ia]*. In the beginnings the Latins wrote the same way, and from this according to Marius Victorinus came the word *versus*.

six,* the Gentlemen of Port Royal recognize ten, M. Duclos seventeen, and I have no doubt that many more would be found if habit had made the ear more sensitive [to perceive] and the mouth better trained [to produce] the various modifications of which [388] they are capable. Depending on the refinement of the organ[s of speech and hearing], a greater or smaller number of these modifications will be found between the acute *a* and the grave *o*, between the open *i* and the open *e*, etc. Anyone can experience this by moving from one vowel to the next in a continuous, modulated voice; for to the extent that one has made oneself more or less sensitive to them by dint of habit, one can single out more or fewer of these nuances and mark each with its own distinctive character, and this habit depends on the kinds of vocalizations [*voix*] common in the language to which the organ imperceptibly conforms. Much the same can be said about articulated letters, or consonants. But this is not how most nations went about it. They took over one another's alphabets and represented very different vocalizations [*voix*] and articulations by the same characters. This is why, unless one is very well trained, one invariably sounds ridiculous reading in a language other than one's own, no matter how faithful its spelling is [to the way it sounds].

[13] Writing, which might be expected to fix language, is precisely what adulterates it; it changes not its words but its genius; it substitutes precision for expressiveness. One conveys one's sentiments in speaking, and one's ideas in writing. In writing one is forced to use every word in conformity with common usage; but a speaker alters meanings by his tone of voice, determining them as he wishes; since he is less constrained to be clear, he stresses forcefulness more, and a language that is written cannot possibly retain for long the liveliness of one that is only spoken. What gets written down are words [*voix*], not sounds; yet in an accented language it is the sounds, the accents, the inflections of every sort, that constitute the greatest part of the vigor of the language; and make a phrase, that is otherwise common, the only appropriate one in the place where it is. The means used to substitute for this [feature of spoken language] enlarge [and] stretch written language, and as they

* Greek records seven vowels, Romulus six, later usage five, once the Y was rejected as Greek. Mart[ianus] Capel[la]. i. iii.

pass from books into discourse, they enervate speech itself.* When we say everything as it would get written, all we do is to read as we speak.

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CHAPTER SIX

WHETHER IT IS LIKELY THAT HOMER KNEW HOW TO WRITE

[1] Regardless of what we may be told about the invention of the Greek alphabet, I believe it to be much more modern than it is said to be, and I base this opinion mainly on the character of the language. It has often occurred to me to doubt not only that Homer knew how to write, but even that in his time anyone wrote. I am very sorry that this doubt is so categorically contradicted by the Story of Bellerophon in the *Iliad*; since I, no less than Father Hardouin, have the misfortune to be rather stubborn about my paradoxes, I would be sorely tempted, if I were less ignorant, to extend my doubts to this Story itself, and to tax it with having been uncritically interpolated by the compilers of Homer. Not only are few traces of this art to be found in the rest of the *Iliad*; but I dare say that the entire *Odyssey* is but a tissue of stupidities and inanities which one or two letters would have reduced to thin air, whereas the Poem becomes reasonable and even rather well plotted on the assumption that its Heroes knew nothing of writing. If the *Iliad* had been written it would have been sung less often, Rhapsodes would have been less in demand and their number would have increased less. No other poet has been sung so much with the possible excep-

* The best such means and one that would be free of this defect would be punctuation, if it had not been left in such an imperfect state. Why, for example, have we not a vocative mark? The question mark which we do have was much less necessary; for one can see from the construction alone whether or not a question is being asked, at least in our language. *Are you coming* and *you are coming* are not the same thing. But how is one to distinguish in writing a man who is being [389] mentioned from one being addressed? This truly is an equivocation which the vocative mark would have eliminated. The same equivocation occurs in irony, when accent fails to convey it.

tion of Tasso in Venice and he only by Gondoliers, who are not great readers. The variety of dialects used by Homer is further strong presumptive evidence. Writing assimilates and blends the dialects which speech differentiates, and everything imperceptibly tends to conform to a common model. In proportion as a nation reads and studies, its dialects fade, and finally they survive only in vernacular form among the people, which reads little and writes not at all.

[2] Now since these two Poems are later than the siege of [390] Troy, it is hardly likely that the Greeks who conducted that siege were acquainted with writing, while the Poet who sang of it was not. For a long time these Poems were written only in men's memories; they were compiled in written form rather late and with considerable difficulty. It was when Greece began to abound in books and written poetry that the whole charm of Homer's poetry came to be felt by comparison. The other Poets wrote, Homer alone had sung, and these divine songs ceased to be listened to with delight only after Europe was blanketed with barbarians who took it upon themselves to judge what they were incapable of feeling.

CHAPTER SEVEN OF MODERN PROSODY

[1] We have no idea of a sonorous and harmonious language that speaks as much by means of sounds as by means of voices [or words, *voix*]. It is an error to believe that written accents can replace vocal accents: Written accents are invented only once vocal accent is lost.*

* Some scholars claim counter to the common opinion and to the evidence of all ancient manuscripts that the Greeks knew and used the written signs called accents, and they base their opinion on two texts, both of which I will transcribe in order to permit the Reader to assess their true meaning.

Here is the first, taken from Cicero's treatise *Of the Orator*, Book III, Section 44: *After this painstaking labor [of ordering words], there remains rhythm and harmony of phrasing which, I fear, Catulus, may appear puerile to you. Indeed, according to the ancient masters, prose exhibited something analogous to verse, namely a kind of number; they wanted the phrases in speeches punctuated by pauses for breath and not*

What is more, we believe that we have [391] accents in our language, although we have none whatsoever: Our supposed accents are nothing but vowels or signs of quantity; they do not indicate any variation in sound. The proof is that all of these accents are produced either by unequal duration or by altered positions of the lips, the tongue, or the palate, all of which make for variety of voices [*voix*]; none by changes in the glottis, which make for the variety of sounds. Thus when our circumflex does not indicate a simple voice [*voix*], it indicates either a long vowel or nothing at all. Let us now see what it was for the Greeks.

[2] *Dionysus of Halicarnassus says that on the acute accent the tone was raised, and on the grave it was lowered by a fifth; the prosodic accent was thus also a musical accent, especially the circumflex, where the voice, after having risen by a fifth, dropped by another fifth on the same syllable.** This passage and its context clearly indicate that M. Duclos does not recognize a musical accent in our language but only the prosodic and the vocal accents; to these is added an orthographic accent which in no way affects the voice, or the sound, or

because of shortness of breath, nor did they want them indicated by copyists' marks, but by phrasing. Isocrates is said to have been the first who, as his disciple Naucrates put it, in order to flatter the ear, established the rule of subjecting prose, which until then had been without rule, to a rhythm. Indeed, the musicians, who were formerly also poets, in order to please, invented these two ways, verse and song, so that the rhythm of the words and the harmony of the sounds might prevent a surfeit of the ear. They thought that they should transfer these two innovations, I mean the art of regulating the voice, and that of indicating the end of phrases by some rhythmical pattern, from poetry into eloquence to the full extent that discourse, a serious matter, might permit it.

Here is the second, drawn from Isidore's *Origins*, Book 1, Chapter 20: *In addition, there are signs found in the most celebrated writers, and the ancients introduced them into verse and prose in order to punctuate their writings. The sign [391] is a specific mark, placed in the manner of a letter in order in each case to indicate the phrase pattern. The number of signs introduced in verse is 26, and their names are given below, etc.*

To me this indicates that the good copyists of Cicero's time separated words and that they used signs equivalent to our punctuation. It also indicates to me the invention of number [*i.e.* meter] and of prose declamation attributed to Isocrates. But I see nothing at all here of written signs or accents, and even if I did, it would justify only a single conclusion which I do not deny and which is in perfect conformity with my principles, namely that when the Romans began to study Greek, the Copyists, in order to help them with its pronunciation, invented signs for accents, aspiration, and prosody; but it would not at all follow that these signs were used by the Greeks, who had no need of them.

* M. Duclos, *Rem[arques] sur la gram[mair]e g[éné]r[ale] et raisonnée*, p. 30.

the quantity, but which sometimes indicates an omitted letter, as does the circumflex, while at other times it specifies the meaning of an otherwise equivocal monosyllable, such as the so-called grave accent that distinguishes the adverb of place *où* [where] from the disjunctive particle *ou* [or], and *à* [to] used as an article from the same *a* [has] used as a verb: this accent differentiates between these monosyllables for the eye alone, nothing differentiates between their pronunciation.** Thus the definition of the accent generally accepted by the French [392] does not fit a single one of the accents in their language.

[3] I fully expect that some of their grammarians having been taught that accents mark a raising or a lowering of the voice will here again tax me with paradoxes, and for want of paying sufficiently close attention to experience they will think that they are using different movements of the glottis to produce the very accents which they produce exclusively by opening the mouth or placing the tongue in different ways. But here is what I suggest they do in order to verify what actually takes place and to prove my point incontrovertibly.

[4] Attune your voice perfectly to some musical instrument and on this unison note pronounce, one after the other, all the most variously accented French words you can think of; since only the grammatical and not the rhetorical accent is at issue here, these different words need not even make any sustained sense. Make a note of whether, as you speak in this fashion, you do not indicate all the accents as distinctly and as clearly at this one level of sound as you would if you spoke unhampered, varying the tone of your voice. Now assuming this to be the case, and indisputably it is, I say that since all your accents are expressed at the same pitch, they do not indicate different sounds. I cannot imagine what might be said in rebuttal to this.

[5] Any language in which the same words can be set to several melodies has no settled musical accent. If the accent were fixed, so

** It might seem that this is the accent by which the Italians distinguish between for example the verbal form *è* [is] and the conjunction *e* [and]; but the first is perceptible to the ear as a stronger and more emphatic sound, which makes the accent with which it is written a vocal accent: an observation which Buonmattei should not have failed to make.

would the melody be. As soon as the tune is a matter of choice, accent counts for naught.

[6] All modern European languages are more or less in the same situation; I do not even exclude Italian. By itself, Italian is no more a musical language than is French. The difference is simply that one lends itself to music and the other does not.

[7] All this tends to confirm the following principle, that by a natural progress all lettered languages must change character and lose force as they gain in clarity, that the more one insists on perfecting grammar and logic the more one accelerates this progress, and that in order to cause a language to grow rapidly frigid and monotonous one need only establish academies among the people who speak it. [393]

[8] Derivative languages are recognized by the discrepancy between spelling and pronunciation. The older and the purer languages are, the less arbitrary is their pronunciation, and hence the less complicated are the characters that indicate pronunciation. *All of the ancients' prosodic signs*, says M. Duclos, *even assuming that they were used with great consistency, still were not as important as usage*. I would go further; they replaced it. The ancient Hebrews had neither punctuation nor accents, they did not even have vowels. When other Nations began to try to speak Hebrew and the Jews spoke other languages, theirs lost its accent; [punctuation] signs and [vowel] points became necessary to set it in order, and this restored the meaning of words far more than it did the pronunciation of the language. The Jews of today, speaking Hebrew, would no longer be understood by their ancestors.

[9] In order to know English, one has to learn it twice, once to read it, the other to speak it. If a foreigner glances at the book from which an Englishman is reading aloud, he will perceive no connection at all between what he sees and what he hears. Why is this so? Because England was conquered by a succession of peoples and, while the words continued to be written as before, their pronunciation has often changed. There is a considerable difference between the signs that establish the meaning of what is written and those that govern pronunciation. It would be easy to construct a language made up exclusively of the consonants, which would be very clear in its written form, but could not be spoken. Algebra has something

of this language. When the spelling of a language is clearer than its pronunciation, it indicates that this language is written more than it is spoken; Such may have been the learned language of the Egyptians; such are for us the dead languages. In the case of languages burdened with useless consonants, writing even seems to have preceded speech, and it is difficult to resist the suspicion that this is what happened with Polish. If it did, then Polish must be the most frigid of all languages.

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CHAPTER EIGHT

GENERAL AND LOCAL DIFFERENCES IN THE ORIGIN OF LANGUAGES

[1] Everything I have said so far applies to primitive languages in general and to such progress as results from their age, but it explains neither their origin nor their differences. The principal cause for the differences between them is local, a consequence of the climates in which they are born and of the manner in which they are formed, [and] it is to this cause that one has to go back in order to conceive the general and characteristic difference that is found to obtain between the languages of the south and those of the north. The great failing of Europeans is always to philosophize about the origin of things in the light of what happens right around them. They never fail to show us the first men living in a barren and harsh land, dying of cold and hunger, anxious to secure shelter and clothing; everywhere they see only the snow and ice of Europe, without taking into account that the human species like all the others was born in the warm countries and that in two-thirds of the globe winter is hardly known. When one proposes to study men one has to look close by; but in order to study man one has to learn to cast one's glance afar; one has to begin by observing the differences in order to discover the properties.

[2] Mankind born in the warm countries spreads from there to the cold countries; it is in these that it multiplies and then flows

back into the warm countries. To this action and reaction are due the earth's revolutions and the ceaseless agitation of its inhabitants. Let us try to follow the order of nature itself in our inquiries. I enter upon a long digression about a topic so hackneyed as to have become trivial, but to which one nevertheless always has to return however reluctantly in order to discover the origin of human institutions.

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CHAPTER NINE

THE FORMATION OF SOUTHERN LANGUAGES

[1] In the first times* men scattered over the face of the earth had no society other than that of the family, no laws other than those of nature, no language other than gesture and a few inarticulate sounds.** They were not bound by any idea of common brotherhood and, since they had no arbiter other than force, they believed themselves to be one another's enemies. It was to their weakness and ignorance that they owed this opinion. Knowing nothing they feared everything, they attacked in order to defend themselves. A man abandoned alone on the face of the earth at the mercy of mankind had to be a ferocious animal. He was ready to inflict on others all the harm he feared from them. Fear and weakness are the sources of cruelty.

[2] The social affections develop in us only with our knowledge. Pity, although natural to man's heart, would remain eternally inactive without imagination to set it in motion. How do we let our-

* I call first the times of men's dispersion, regardless of the age one chooses to assign to mankind at that period.

** Genuine languages have not a domestic origin; only a more comprehensive and lasting convention can establish them. The Savages of America almost never speak except when away from home; in his hut everyone remains silent and speaks to his family by means of signs, and these signs are infrequent because a Savage is less restless, less impatient than a European, because he has not as many needs and takes care to attend to them himself.

selves be moved to pity? By transporting ourselves outside ourselves; by identifying with the suffering being. We suffer only to the extent that we judge it to suffer; we suffer not in ourselves but in it. Think how much acquired knowledge this transport presupposes! How could I imagine evils of which I have no idea? How could I suffer when I see another suffer if I do not even know that he suffers, if I do not know what he and I have in common? Someone who has never reflected cannot be clement, or just, or pitying; nor can he be wicked [396] and vindictive. He who imagines nothing feels only himself; in the midst of mankind he is alone.

[3] Reflection is born of the comparison of ideas, and it is their variety that leads us to compare them. Whoever sees only a single object has no occasion to make comparisons. Whoever sees only a small number and always the same ones from childhood on still does not compare them, because the habit of seeing them deprives him of the attention required to examine them: but as a new object strikes us, we want to know it, we look for relations between it and the objects we do know; this is how we learn to observe what we see before us, and how what is foreign to us leads us to examine what touches us.

[4] Apply these ideas to the first men, you will see the reason for their barbarism. Never having seen anything other than what was around them, they did not know even it; they did not know themselves. They had the idea of a Father, a son, a brother, but not of a man. Their hut held all those who were like themselves; a stranger, an animal, a monster were all the same to them: outside of themselves and their family, the whole universe was naught to them.

[5] Hence the apparent contradictions one sees in the fathers of nations: Such naturalness and such inhumanity, such ferocious ways [*moeurs*] and such tender hearts, so much love for their family and aversion toward their species. All their sentiments concentrated among their near ones were therefore the more energetic. Everything they knew they held dear. Enemies of the rest of the world which they neither saw nor knew, they hated only what they could not know.

[6] These times of barbarism were the golden age; not because men were united, but because they were separated. Everyone, it is said, considered himself to be master of everything; that may be

so; but no one knew or desired anything but what was ready to hand: his needs, far from drawing him closer to those like himself, draw him away from them. Men may have attacked one another upon meeting, but they rarely met. Everywhere the state of war prevailed, yet the whole earth was at peace.

[7] The first men were hunters or shepherds and not tillers of the soil; the first goods were herds [397] not fields. Before ownership of the earth was divided no one thought of cultivating it. Agriculture is an art that requires tools; to sow in order to reap is a measure requiring foresight. Man in society seeks to expand, isolated man contracts. Beyond where his eye can see or his arm reach, there no longer is either right or property for him. Once the Cyclops has rolled the stone in front of the entrance to his cave his herds and he are safe. But who would protect the harvest of a man for whom the laws do not watch out?

[8] I will be told that Cain was a tiller of the soil and that Noah planted a vineyard. Why not? They were alone; what did they have to fear? Besides this does nothing to counter my point; I have stated above how I conceive of the first times. When Cain became a fugitive he was after all forced to give up agriculture; the wandering life of Noah's descendants must have made them forget it also; the earth had to be populated before it could be cultivated; the two cannot readily be done together. During the first dispersion of mankind, until the family was stabilized and man had a fixed dwelling, there was no more agriculture. Peoples that do not settle cannot possibly cultivate the soil; such formerly were the Nomads, such were the Arabs living in their tents, the Scythians in their wagons, such are still today the wandering Tartars, and the Savages of America.

[9] As a rule of all of the peoples whose origin we know the first barbarians are found to be voracious and carnivorous rather than agricultural and granivorous. The Greeks [refer by] name [to] the person who first taught them to till the soil, and it would seem that they did not know this art until quite late: But when they add that until the time of Triptolemus they lived solely off acorns, they make an implausible claim and one which their own history belies; for they had been eating meat prior to Triptolemus, since he forbade them to eat it. Besides, it would seem that they did not take this prohibition very seriously.

[10] At Homer's feasts an ox is slaughtered to regale one's guests, as one might nowadays slaughter a suckling pig. On reading that Abraham served a calf to three people, that Eumaeus had two kids roasted for Ulysses's dinner, and that Rebecca did the same for [398] her husband's, one may gather what terrible devourers of meat men were in those times. To get a notion of the meals of the ancients one need only consider the meals of present-day Savages; I almost said those of Englishmen.

[11] The first cake that was eaten was the communion of mankind. When men began to settle they cleared a bit of land around their hut, it was a garden rather than a field. The little grain they gathered was ground between two stones, made into a few cakes baked in ashes or over embers or on a hot stone, and eaten only at feasts. This ancient practice consecrated among the Jews by Pass-over is preserved to this day in Persia and in the [East] Indies. They eat only unleavened breads there, and these breads made up of thin sheets are baked and eaten at every meal. Only when more bread came to be needed did it occur to people to leaven it, for small quantities do not readily lend themselves to leavening.

[12] I know that large-scale agriculture is found as early as the time of the patriarchs. The proximity of Egypt must have introduced it into Palestine quite early. The book of Job, the oldest, perhaps, of all extant books, speaks of the cultivation of fields, it lists five hundred pairs of oxen as part of Job's wealth; the term pairs indicates that these oxen were yoked for work; it is explicitly stated that these oxen were plowing when the Sabeans carried them off, and one can readily gather what an expanse of land five hundred teams of oxen must have plowed.

[13] All this is true; but let us not confuse different times. What we call the age of the patriarchs is very remote from the first age. Scripture lists ten generations between them in those centuries when men lived a long time. What did they do during these ten generations? We know nothing about it. Since they lived scattered and almost without society they scarcely spoke, how could they have written, and given the regularity of their isolated life what events would they have transmitted to us?

[14] Adam spoke; Noah spoke; granted. Adam had been taught by God himself. When they separated, the children of Noah gave up agriculture, and the common language perished together with

the first society. This would have happened even if there had never [399] been a tower of [B]abel. Solitaries living on desert islands have been known to forget their own language: After several generations away from their country men rarely preserve their original language, even when they work together and live in society with one another.

[15] Scattered throughout this vast desert of a world, men relapsed into the dull barbarism they would have been in if they had been born of the earth. By following [the thread of] these entirely natural ideas it is easy to reconcile the authority of Scripture with ancient records, and there is no need to treat as fables traditions that are as old as are the peoples that have handed them down to us.

[16] In this brutish state they had to live. The most active, the most robust, those who were always on the move could only live off fruit and the hunt; so they became hunters, violent, bloodthirsty and, in time, warriors, conquerors, usurpers. History has stained its records with the crimes of these first Kings; war and conquests are nothing but manhunts. Once they had conquered, it only remained for them to devour men. This is what their successors learned to do.

[17] The greater number, less active and more peaceable, stopped as soon as they could, gathered cattle, tamed them, taught them to heed man's voice, learned to tend them and increase their number so as to have them for food; and this is how pastoral life began.

[18] Human industry expands with the needs that give rise to it. Of the three ways of life available to man, hunting, herding, and agriculture, the first develops strength, skill, speed of body, courage and cunning of soul, it hardens man and makes him ferocious. The land of the hunters does not long remain that of the hunt.* Game has to be pursued over great distances, hence horsemanship. Game that flees has to be caught, hence light arms, the sling, the arrow, the javelin. [400] The pastoral art, father of repose and of

* The practice of hunting is not at all favorable to population [growth]. This observation, made when the Islands of Santo Domingo and Tortuga were inhabited by buccaneers, is confirmed by the state of northern America. None of the fathers of large nations were hunters by [e]state; all of them were farmers or shepherds. Hunting must then here be regarded less as a primary means of subsistence than as a supplement to the pastoral state.

the indolent passions, is the most self-sufficient art. It almost effortlessly provides man with food and clothing; It even provides him with his dwelling; the tents of the first shepherds were made of animal skins: so were the roofs of the ark and the tabernacle of Moses. As for agriculture, it arises later and involves all the arts; it introduces property, government, laws, and gradually wretchedness and crimes, inseparable for our species from the knowledge of good and evil. Hence the Greeks viewed Triptolemus not merely as the inventor of a useful art, but as a founder and a wise man to whom they owed their first education and their first laws. Moses, on the other hand, appears to have disapproved of agriculture by attributing its invention to a wicked man and making God reject his offerings: the first tiller of the ground would seem to have proclaimed by his character the bad effects of his art. The author of Genesis had seen farther than had Herodotus.

[19] The preceding division corresponds to the three states of man considered in relation to society. The savage is a hunter, the barbarian a herdsman, civil man a tiller of the soil.

[20] So that regardless of whether one inquires into the origin of the arts or studies the earliest morals [or ways of life, *moeurs*] everything is seen to be related in its principle to the means by which men provide for their subsistence, and as for those among these means that unite men, they are a function of the climate and of the nature of the soil. Hence the diversity of languages and their opposite characteristics must also be explained by the same causes.

[21] Mild climates, lush and fertile lands were the first to be populated and the last where nations were formed, because there men could more easily do without one another, and the needs that cause society to be born made themselves felt later there.

[22] Assume perpetual spring on earth; assume water, cattle, pastures everywhere; assume men issuing from the hands of nature and dispersed throughout all this: I cannot imagine how they would ever have renounced their primitive freedom and left the isolated and pastoral existence that so well suits their natural indolence,*

* The extent to which man is naturally lazy is simply inconceivable. It would seem that he lives solely in order to sleep, to vegetate, to remain motionless; he can scarcely decide to go through the motions required to keep from dying of hunger. Nothing keeps the savages loving their state as much as this delicious indolence. The passions that cause man to be restless, provident, active, are born only in

[401] in order to impose on themselves without any necessity the slavery, the labors, and the miseries that are inseparable from the social state.

[23] He who willed man to be sociable inclined the globe's axis at an angle to the axis of the universe with a touch of the finger. With this slight motion I see the face of the earth change and the vocation of mankind settled: I hear, far off, the joyous cries of a heedless multitude; I see Palaces and Cities raised; I see the birth of the arts, laws, commerce; I see peoples forming, expanding, dissolving, succeeding one another like the waves of the sea: I see men clustered in a few points of their habitation in order there to devour one another, turning the remainder of the world into a dreadful desert; a worthy monument to social union and the usefulness of the arts.

[24] The earth nourishes men; but after the first needs have dispersed them other needs bring them back together, and it is only then that they speak and cause others to speak about them. In order not to be found in contradiction with myself I must be allowed time to explain myself.

[25] When one inquires in what regions the fathers of mankind were born, where the first colonies set out from, where the first emigrations originated, you will not name the happy climes of Asia Minor or of Sicily, or of Africa, or even of Egypt; you will name the sands of Chaldea, the rocks of Phoenicia. You will find that it is so at all times. Regardless of how many Chinese populate China, it also gets populated by Tartars; the Scythians inundated Europe and Asia; the mountains of Switzerland are currently pouring into our fertile regions a continuous stream of colonists that promises not to dry up.

[26] It is natural, it is said, that the inhabitants of a barren land leave it for a better. Very well; but why does this better land make room for others, instead of swarming with its [402] own inhabitants? To leave a barren land, one has to be there in the first place. Why then are so many men born there rather than elsewhere? One might expect harsh lands to be populated only with the excess from fertile

society. To do nothing is man's primary and strongest passion after that of self-preservation. If one looked at it more closely, one would find that even among us people work only in order to get to rest: it is still laziness that makes us industrious.

lands, and yet we see the opposite to be the case. Most Latin peoples called themselves aboriginal,* whereas much more fertile Magna Graecia was populated exclusively by foreigners. All Greek peoples acknowledged that they originally grew out of various colonies, except the one whose soil was the worst, namely the Attic people which called itself Autochthonous or born from itself. Finally without piercing the night of time, modern centuries provide one conclusive piece of evidence; indeed, where on earth is the climate drearier than in what has been called the factory of mankind?

[27] Human associations are in large measure the work of accidents of nature; local floods, overflowing seas, volcanic eruptions, major earthquakes, fires started by lightning and destroying forests, everything that must have frightened and dispersed the savage inhabitants of a land must afterwards have brought them back together to restore in common their common losses. The frequent ancient traditions about natural disasters show what instruments providence used to force humans to come together. Ever since societies have been established these great accidents have ceased and become increasingly rare; it would seem that this too has to be so; the same calamities that brought scattered men together would disperse those who are united.

[28] The revolutions of the seasons are another more general and more permanent cause that must have produced the same effect in the climates subject to these changes. Forced to make provisions for winter, people have to help one another and are thus compelled to establish some kind of convention amongst themselves. When expeditions become impossible and they can no longer get about because of the extreme cold, boredom unites them as much as [did] need: the Lapps, buried in their ice, the Eskimos, the most savage of all peoples, come together in their caverns in winter [403] and in summer no longer know one another. Increase their development and their enlightenment by one degree, and they are united forever.

[29] Neither man's stomach nor his intestines are made to digest raw meat; generally he cannot stand its taste. With the possible single exception of the Eskimos whom I just mentioned, even sav-

* The terms *Autochthons* and *Aborigines* merely mean that the first inhabitants of the land were savages without societies, without laws, without traditions, and that they populated it before they spoke.

ages grill their meats. Fire, in addition to being necessary for cooking meats, also delights the eye and its warmth is pleasing to the body. The sight of the flame which causes animals to flee attracts man.* Around a common hearth people gather, feast, dance; the sweet bonds of familiarity imperceptibly draw man to his kind, and on this rustic hearth burns the sacred fire that introduces the first sentiment of humanity into men's hearts.

[30] In warm lands, unevenly scattered springs and rivers are further meeting places all the more necessary inasmuch as men can do without water even less than they can do without fire. Barbarians who live off their herds are especially in need of common watering places, and we learn from the history of the most remote ages that this is indeed where their treaties as well as their quarrels began.* Easy access to water can delay the emergence of society among those who live where it is plentiful. In arid places on the other hand people had to cooperate in sinking wells and digging ditches to provide water for their cattle. Associations of men are found there almost from time immemorial, for the land was either going to remain desert or be made inhabitable by man's labor. But our tendency to refer everything to our own practices calls for some reflections on this subject.

[31] The first state of the earth differed greatly from its present state, when it is seen embellished or disfigured by [404] men's hand. The chaos which the Poets feigned among the elements did reign among its productions. In those remote times when revolutions were frequent, when numberless accidents altered the nature of the soil and the features of the terrain, everything grew confusedly, trees, vegetables, shrubs, grasses; no species had time to seize the terrain that suited it best and to root out the others from it; they

* Fire gives much pleasure to animals as well as to man, once they have become accustomed to its sight and felt its gentle warmth. Often it would even prove no less useful to them than to us, if only to warm their young. Yet no one has ever heard of any animal, wild or domestic, which, even by imitating us, acquired the skills required to make fire. And these are the reasoning beings that are said to form a fugitive prehuman society, although their intelligence could not rise to the level of drawing sparks from a stone and catching them [on tinder], or at least of keeping some abandoned fire going! Upon my word, the philosophers quite openly mock us. Their writings clearly show that they indeed take us for beasts.

* See the instance of the one as well as of the other between Abraham and Abimelech in connection with the well of the Oath in chapter 21 of *Genesis*.

divided slowly, little by little, and then there would be a sudden upheaval that confused everything.

[32] The relation between man's needs and the productions of the earth is such that so long as it is populated, everything subsists; but before men united had, by their common labors, introduced a balance among its productions, they could all subsist only if nature alone attended to the equilibrium which the hand of men preserves today; nature maintained or restored this equilibrium by revolutions, just as men maintain or restore it by their inconstancy. The war that did not yet reign between them seemed to reign between the elements; men did not burn cities, dig mines, fell trees; but nature sparked volcanoes, stirred up earthquakes, the fire of Heaven devoured forests. A bolt of lightning, a flood, a volcanic eruption did then in a few hours what a hundred thousand human hands now do in a century. I see no other way in which the system could have subsisted and the equilibrium maintained itself. In the two realms of organized beings the larger species would in the long run have absorbed the smaller.* The entire earth would soon have been covered with nothing but trees and ferocious beasts; eventually everything would have perished.

[33] The water cycle which nourishes the earth would little by little have broken down. [405] Mountains get worn down and smaller, rivers silt up, the sea rises and spreads, everything imperceptibly tends toward the same level; the hand of men slows this drift and delays this progress; without them it would proceed faster, and the earth might perhaps already be under water. Springs are poorly distributed and, prior to human labor, they flowed less evenly, fertilized the earth less [adequately], made its inhabitants' supply of drinking water more difficult. Rivers were often inaccessible, their banks steep or marshy: since human art did not retain

* It is claimed that by a kind of natural action and reaction the various species of the animal kingdom would of themselves maintain themselves in a perpetual balancing [or seesaw] which would be tantamount to their being in equilibrium. Once the devouring species has, it is said, increased too much at the expense of the devoured species, the first, finding no more food, will have to decrease and allow the other time to replenish its numbers; until it again provides ample food for the first and once more decreases while the devouring species is replenished anew. But such an oscillation seems quite implausible to me: for according to this system there has to be a period during which the preyed-upon species increases and the predator species decreases; which seems to me to be altogether contrary to reason.

them in their beds they often overflowed, flooded one bank or the other, changed directions and course, divided into various branches; sometimes they would dry up, sometimes quicksand blocked access to them; it was as if they did not exist, and men died of thirst surrounded by water.

[34] How many arid lands are inhabitable only thanks to men's draining and channeling of rivers. Almost the whole of Persia subsists only by means of this artifice: China abounds in People because of its many canals: without their canals, the Low Countries would be flooded by rivers, as they would be flooded by the sea without their dikes: Egypt, the most fertile country on earth, is inhabitable only as a result of human labor. On the great plains where there are no rivers and where the gradient is not sufficiently steep there is no alternative to wells. So that the reason why the first peoples mentioned in history did not live in lush lands or easily accessible shores is not that these happy climes were deserted, but that their numerous inhabitants could do without one another and therefore lived isolated in their families with no outside communication for a longer time. But in arid regions, where water could only be had from wells, people had no alternative but to get together to dig them, or at least to agree about their use. Such must have been the origin of societies and of languages in warm lands.

[35] Here the first ties between families were established; here meetings between the sexes took place. Young girls came to fetch water for the household, young men came to water their herds. Here eyes accustomed from childhood [406] to forever the same objects began to see sweeter ones. The heart was moved by these new objects, an unfamiliar attraction rendered it less savage, it felt the pleasure of not being alone. Imperceptibly water came to be more needed, the cattle were thirsty more often; one arrived in haste and left with reluctance. In this happy age when nothing recorded the hours, nothing required them to be counted; time had no other measure than enjoyment and boredom. Beneath old oaks, conquerors of years, spirited young people gradually forgot their ferociousness, little by little they tamed one another; in striving to make themselves understood they learned to make themselves intelligible. Here the first festivals took place; feet skipped with joy, an eager gesture no longer proved adequate, the voice accompanied it with passionate accents, pleasure and desire merged into one and

made themselves felt together. Here, finally, was the true cradle of peoples, and from the pure crystal of the fountains sprang the first fires of love.

[36] What! were men born of the earth before that time? Did generation succeed upon generation without union between the sexes and without any mutual understanding? No, there were families, but there were no Nations; there were domestic languages, but there were no popular languages; there were marriages, but there was no love. Each family was self-sufficient and propagated itself from its own stock alone. Children born of the same parents grew up together and little by little found ways to make themselves intelligible to one another; the distinction between the sexes appeared with age, natural inclinations sufficed to unite them, instinct took the place of passion, habit took the place of predilection, people became husband and wife without having ceased to be brother and sister.* None of this was sufficiently lively to untie tongues, none of it such as to wring the accents of the ardent passions sufficiently frequently to establish them as institutions, and [407] the same may be said of the occasional and not particularly pressing needs that may have led some men to collaborate on common labors: one started the basin of the fountain, and another later finished it, often without their having had the slightest need of any agreements and sometimes without even having seen one another. In a word, in mild climates, in fertile regions it took all the liveliness of the agreeable passions to start men speaking. The first languages, daughters of pleasure and not of need, long remained under the aegis of their father; their seductive accent faded only with the sentiments that had given them birth when new needs that had been introduced among men forced everyone to think only of himself and to withdraw his heart within himself.

* The first men had to marry their sisters. In view of the simplicity of the first morals this practice continued without prejudice as long as families remained isolated and even after the most ancient peoples had come together; but the law that abolished it is no less sacred for being by human institution. Those who view it solely in terms of the bond it established between families fail to see its most important aspect. In view of the intimacy between the sexes that inevitably attends upon domestic life, the moment such a sacred law ceased to speak to the heart and to awe the senses, men would cease to be upright, and the most frightful morals would soon cause the destruction of mankind.

CHAPTER TEN

THE FORMATION OF THE LANGUAGES OF THE NORTH

[1] Eventually all men become alike, but the order of their progress differs. In southern climates where nature is prodigal needs are born of the passions, in cold countries, where it is miserly, the passions are born of the needs, and the languages, sad daughters of necessity, reflect their harsh origin.

[2] Although man gets accustomed to the inclemencies of the weather, to cold, to discomfort, even to hunger, there nevertheless is a point at which nature succumbs. A victim of these cruel trials, everything that is weak perishes; everything else is strengthened, and there is no middle ground between vigor and death. This is why northern peoples are so sturdy; it is not initially the climate that made them so, but it suffered only those who were so, and it is not surprising that the children keep their fathers' good constitution.

[3] It is immediately evident that men who are more sturdy must have less delicate organs, their voices must be rougher and stronger. Besides, what a difference between touching inflections that issue from movements of the soul and the cries wrested by physical needs? [408] In those dreadful climates where everything is dead nine months out of the year, where the sun warms the air for a few weeks only in order to let the inhabitants know the benefits of which they are deprived and to prolong their misery, in those regions where the earth yields whatever it yields only after much labor and where the source of life seems to reside more in the hands than in the heart, men, constantly involved in providing for their subsistence, hardly thought about gentler bonds, everything was confined to physical impulsion, opportunity dictated choice, ease dictated preference. Idleness, which feeds the passions, yielded to labor, which represses them. Before one could think about living happy, one had to think about living. Mutual need united men far more effectively than sentiment would have done, society was formed solely through industry, the ever-present danger of perishing did not permit of a language restricted to gesture, and their first word was not *love me* [*aimez-moi*] but *help me* [*aidez-moi*].

[4] These two expressions, although quite similar, are spoken in a very different tone. They had to arouse not sentiment, but understanding; it was therefore not a matter of energy but of clarity. Accent, which was not forthcoming from the heart, was replaced by strong and clear articulations, and if the form of the language made some natural impression, this impression only contributed to its harshness.

[5] Indeed, men of the North are not without passions, but theirs are passions of another kind. The passions of warm climates are voluptuous passions related to love and softness. Nature does so much for those who live there that they have almost nothing left to do. So long as an Asian has women and rest he is content. But in the North, where people consume a great deal and the soil is barren, men subject to so many needs are easily irritated; everything people do around them worries them: since they have a hard time subsisting, the poorer they are, the more they cling to the little they have; to get close to them is to threaten their life. This is what accounts for their irascible temperament, so quick to lash out furiously at everything that offends them. Therefore their most natural voices [*voix*] are those of anger and threats, and these voices are invariably accompanied by strong articulations that make them harsh and noisy.

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CHAPTER ELEVEN

REFLECTIONS ON THESE DIFFERENCES

[1] Such in my opinion are the most general physical causes of the characteristic difference between primitive languages. Those of the South must have been lively, resonant, accentuated, eloquent, and often obscure by dint of energy: those of the North must have been muted, crude, articulated, shrill, monotone, clear by dint of their words rather than of good construction. Modern languages, intermingled and recast hundreds of times, still retain something of these differences. French, English, German are the private languages of men who help one another, who argue with one another in cold

blood, or of excited men who get angry; but the ministers of the Gods proclaiming the sacred mysteries, the Wise giving laws to the peoples, leaders swaying the masses must speak Arabic or Persian.* Our languages are better written than spoken, and it is more pleasant to read us than it is to listen to us. In contrast oriental languages lose their life and warmth when they are written down. Only half the meaning is conveyed by the words, all its force is in the accents. To judge the orientals' genius from their Books is like trying to paint a man's portrait from his corpse.

[2] In order to assess men's actions properly, one has to consider them in all their relations and this is something we are simply not taught to do. When we put ourselves in the place of others we always put ourselves in their place as circumstances have modified us, not as they must have modified them, and when we think that we are judging them in the light of reason, we are only comparing their prejudices with ours. A man able to read a little Arabic smiles as he leafs through the Koran, who, if he had heard Mohammed himself proclaim it in that eloquent and rhythmic language, in that resonant and persuasive voice which seduced the ear before it did the heart, constantly animating his pithy sayings with the accent of enthusiasm, would have prostrated himself on the ground crying out, Great [410] Prophet, Messenger of God, lead us to glory, to martyrdom; we want to conquer or to die for you. Fanaticism always appears ludicrous to us, because it has no voice to command a hearing among us. Even our fanatics are not true fanatics, they are but knaves or madmen. Our languages, instead of inflections for men inspired, only provide cries for men possessed by the Devil.

CHAPTER TWELVE

THE ORIGIN OF MUSIC

[1] Together with the first voices [*voix*] were formed either the first articulations or the first sounds, depending on the kind of passion

* Turkish is a northern language.

that dictated them. Anger wrests [from us] threatening cries which the tongue and the palate articulate; but the voice of tenderness is gentler, it is modulated by the glottis, and this voice becomes a sound. However, its accents are more or less frequent, its inflections more or less acute depending on the sentiment that accompanies it. Thus cadence and sounds are born together with syllables: passion rouses all of the [vocal] organs to speech, and adorns the voice with their full brilliance; thus verse, song, speech have a common origin. Around the fountains which I have mentioned, the first speeches were the first songs: the periodic and measured recurrences of rhythm, the melodious inflections of accents, caused poetry and music to be born together with language, or rather all this was nothing other than language itself in those happy climates and those happy ages when the only pressing needs that required another's collaboration were needs born of the heart.

[2] The first stories, the first declamations, the first laws were in verse; poetry was discovered before prose; it had to be so, since the passions spoke before reason. The same was true of music; [411] at first there was no music other than melody, nor any other melody than the varied sound of speech, accents formed the song, quantities formed measure, and people spoke as much by sonorities and rhythm as by articulations and voices. To say and to sing were formerly one, says Strabo; and, he adds, this shows poetry to be the source of eloquence.* He should have said that both sprang from the same source and were initially but the same thing. In view of how the first societies united was it surprising that the first stories were set in verse and that the first laws were sung? Was it surprising that the first Grammarians subordinated their art to music and were at one and the same time teachers of both?**. .

[3] A language that has only articulations and voices [*voix*] is therefore in possession of only half its resources; it conveys ideas, it is true, but in order to convey sentiments, images, it still needs rhythm and sounds [or sonorities], that is to say a melody: this is what the Greek language had, and ours lacks.

* Geogr[aphy], B[ook] 1.

** Architas and Aristoxenus, indeed, thought grammar comprehended under music, and that the same persons taught both subjects . . . So did Eupolis, in whose work Prodamos teaches both music and letters. And Maricas, that is to say Hyperbolus, acknowledges that the musicians teach him nothing but letters. Quintil[ian], B[ook] 1, ch[apter] 10.

[4] We are always astounded by the prodigious effects of eloquence, poetry, and music among the Greeks; we cannot get these effects into our heads, because we no longer experience anything like them, and all we can bring ourselves to do in view of the strong evidence regarding them is to pretend that we believe them as a concession to our scholars.* Burette, having transcribed [412] some pieces of Greek music as best he could into our musical notation, was so naïve as to have these pieces performed at the Academy of Belles Lettres, and the Academicians were so forbearing as to listen to them. I rather admire such an experiment in a country whose music all other nations find indecipherable. Give any foreign Musicians you please a solo from a French opera to perform, I defy you to recognize any part of it. Yet these very Frenchmen took it upon themselves to pass judgment on the melody of one of Pindar's Odes set to Music two thousand years ago!

[5] I have read that American Indians seeing the amazing effects of firearms used to pick musket balls up off the ground; then hurling them by hand while giving out a loud cry with their mouth, they were utterly surprised to find that they had not killed anyone. Our orators, our musicians, our scholars are like those Indians. The wonder is not that we no longer achieve with our music what the Greeks achieved with theirs, it would be, rather, if with such different instruments the same effects were produced.

* Some allowance must probably always be made for Greek exaggeration, but to make such allowances to a point where all differences vanish is really too great a concession to modern prejudice. "It was," says the Abbé Terrasson, "when the music of the Greeks at the time of Amphion and of Orpheus was at the level at which we now find it in the towns farthest away from the Capital; that is when it interrupted the flow of rivers, attracted oaks, and moved rocks. Now that it has reached a very high level of perfection, it is much beloved, its beauties are even understood, but it leaves everything in place. The same was true of the verses of Homer; a Poet born in times which, in comparison with the times that followed, still preserved something of the childhood of the human spirit. Men were enthralled by his verses, whereas nowadays they merely enjoy and appreciate the verses of good poets." There is no denying that the Abbé Terrasson was occasionally philosophic; but he certainly gives no proof of it in this passage.

CHAPTER THIRTEEN OF MELODY

[1] Man is modified by his senses, no one doubts it; but because we fail to distinguish between modifications, we confuse their causes; we attribute both too much and too little power to sensations; we do not realize that often they affect us not only as sensations but as signs or images, and that their moral effects also have moral causes. Just as the sentiments which painting arouses in us are not due to colors, the power which music exercises over our souls is not the product of sounds. Beautiful colors nicely modulated give the eye pleasure, but this pleasure is purely sensory. It is the drawing, the imitation that endows these colors with life and soul, it is the passions which they express that succeed in arousing our own, the objects which they represent that [413] succeed in affecting us. Interest and sentiment do not depend on colors; the lines of a touching painting touch us in an etching as well; remove them from the Painting, and the colors will cease to have any effect.

[2] Melody does in music exactly what drawing does in painting; it indicates the lines and shapes, of which the chords and sounds are but the colors; but, it will be said, melody is nothing but a succession of sounds; no doubt; but drawing is also nothing but an arrangement of colors. An orator uses ink to set down his writings: does this mean that ink is a most eloquent liquid?

[3] Suppose a country where they had no idea of drawing, but where many people who spent their lives combining, mixing, grading colors, believed that they excelled in painting; these people would argue about our painting exactly as we argue about the music of the Greeks. If they were told about the emotion which beautiful paintings arouse in us and the charm of being moved by a pathetic scene, their scholars would immediately delve into the matter, comparing their colors with ours, seeing whether our green is more delicate or our red more brilliant; they would inquire what combinations of colors can cause weeping, what others arouse anger? The Burettes of that country would patch together a few ragtag scraps of our paintings; whereupon people would ask themselves with some astonishment what is so wonderful about that coloration.

[4] But if in a neighboring nation someone began tracing a line, a sketch, some as yet unfinished figure, it would all be regarded as so much scribbling, as willful and baroque painting, and for the sake of preserving [good] taste they would restrict themselves to that simple beauty which really expresses nothing but causes beautiful modulations, large slabs of strong color, extended transitions between hues, to vibrate without a single line.

[5] Finally they might perhaps by dint of progress get to the experiment with the prism. Straightway some famous artist would be sure to erect a fancy system on the basis of it. Gentlemen, he would say to them, if we are to philosophize properly we must go back to the physical causes. Here you have the resolution of light, the primary colors, their relations, [414] their proportions, the true principles of the pleasure you derive from painting. All this mysterious talk about drawing, representation, shape is pure imposture on the part of French painters who think that with their imitations they can arouse I know not what movements in the soul, when it is well known that there are only sensations. You hear wonderful reports about their painting, but look at my hues.

[6] French painters, he would continue, may have noticed the rainbow; nature may have endowed them with some taste for nuance and some instinct for coloration. I, however, have shown you the great, the true principles of the art. What am I saying, of the art? Of all the arts, Gentlemen, of all the Sciences. The analysis of colors, the measurement of prismatic refractions provide you with the only precise relations to be found in nature, with the rule for all relations. Now, everything in the universe is only relations. Hence one knows everything once one knows how to paint, one knows everything once one knows how to match colors.

[7] What would we say about a painter so lacking in sense and taste as to reason this way and stupidly to limit the pleasure painting gives us to the physical aspects of his art? What would we say about a musician who, filled with similar prejudices, believed that harmony alone is the source of the great effects of music? We would send the former off to paint the woodwork, and condemn the other to compose French operas.

[8] As painting is then not the art of combining colors in ways pleasing to the eye, music is also not the art of combining sounds

in ways pleasing to the ear. If this were all there were to them, they would both be natural sciences, not fine arts. Imitation alone raises them to that rank. What makes painting one of the imitative arts? Drawing. What makes music another? Melody.

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CHAPTER FOURTEEN OF HARMONY

[1] The beauty of sounds is by nature; their effect is entirely physical; it is due to the interaction of the different particles of air set in motion by the sounding body and by all of its constituent parts, [continuing] perhaps to infinity: all of these taken together produce a pleasant sensation: all men in the universe will take pleasure in listening to beautiful sounds; but unless this pleasure is enlivened by familiar melodic inflections it will not be [totally] delightful, it will not become utter pleasure [*volupté*]. The songs which to us are the most beautiful will only moderately affect an ear completely unaccustomed to them; it is a language for which one has to have the Dictionary.

[2] Harmony properly so called is in an even less favorable situation. Since all of its beauties are by convention, it does not in any way appeal to ears untutored in it, to experience and to appreciate it requires long-standing familiarity with it. Rude ears perceive our consonances as mere noise. It is not surprising that when the natural proportions are altered, natural pleasure disappears.

[3] A sound carries with it all of its accompanying overtones, so related [to it] in terms of intensity and intervals as to produce its most perfect harmony. Add to it the third or fifth or some other consonant intervals, and what you have done is not to augment it but to double it; you retain the relation of interval while changing that of intensity: by emphasizing one consonant interval and not the others, you upset the proportion: By trying to do better than nature you do worse. Your ear and your taste are spoiled by a misunderstanding of art. By nature there is no other harmony than unison.

[4] M. Rameau contends that comparatively simple trebles naturally suggest their basses, and that a person with a true but untrained ear will naturally sing this bass. That is a musician's prejudice, [416] contradicted by all experience. A person who has never heard either bass or harmony will not only fail to find them on his own, he will even dislike them if he should hear them, and he will very much prefer simple unison.

[5] Even if a thousand years were spent reckoning the relations of sounds and the laws of harmony, how could that art ever be turned into an art of imitation, what would be the principle of this supposed imitation, of what is harmony the sign, and what have chords in common with our passions?

[6] Ask the same question about melody, and the answer is immediately evident, it is in the reader's mind all along. By imitating the inflections of the voice, melody expresses complaints, cries of suffering or of joy, threats, moans; all the vocal signs of the passions fall within its province. It imitates the accents of [various] languages as well as the idiomatic expressions commonly associated in each one of them with given movements of the soul; it not only imitates, it speaks; and its language, though inarticulate, is lively, ardent, passionate, and a hundred times more vigorous than speech itself. This is where musical imitation acquires its force; this is where song acquires its hold on sensitive hearts. In some [musical] systems harmony can contribute to these [effects] by linking the succession of sounds in accordance with a few laws of modulation, by making intonations more accurate and providing the ear with reliable evidence of this accuracy, by reconciling barely perceptible inflections and fixing them to consonant and connected intervals. But by also placing constraints on melody, harmony deprives it of energy and expressiveness, it eliminates the passionate accent in favor of intervals, it restricts to only two modes songs that should have as many modes as there are tones of voice, and it eradicates and destroys a great many sounds or intervals that do not fit into its system; in a word, it separates song and speech to such an extent that these two languages contend, thwart one another, deprive one another of any truth, and cannot be united in the treatment of a passionate subject without appearing absurd. This is why the people always find it ridiculous to have strong, serious passions expressed in song; for they know that in our languages these passions have no musical

inflections at all, and that men of the north no more die singing than do Swans. [417]

[7] By itself, harmony is not even adequate to express what would seem to fall entirely within its province: Thunder, murmuring waters, winds, storms are but poorly rendered by simple chords. Do what you may, mere noise says nothing to the mind, objects have to speak in order to make themselves heard, in every imitation some sort of discourse must always complement the voice of nature. A musician who tries to render noise with noise errs; he knows neither the weaknesses nor the strengths of his art; he judges of it without taste or insight; teach him that he must render noise with song, that if he wished to make frogs croak he would have to make them sing; for it is not enough for him merely to imitate, he must do so in a way that both moves and pleases, otherwise his dreary imitation is as nought, and by failing to arouse anyone's interest, it fails to make any impression.

CHAPTER FIFTEEN

THAT OUR LIVELIEST SENSATIONS OFTEN ACT BY WAY OF MORAL IMPRESSIONS

[1] So long as sounds continue to be considered exclusively in terms of the excitation they trigger in our nerves, the true principles of music and of its power over men's hearts will remain elusive. In a melody, sounds act on us not only as sounds but as signs of our affections, of our sentiments; this is how they arouse in us the [e]motions which they express and the image of which we recognize in them. Something of this moral effect can be discerned even in animals. One Dog's barking attracts another. When my cat hears me imitate a miaowing, he is immediately alert, restless, tense. As soon as he notices that it is I, imitating the sounds of a cat, he sits back down and relaxes. What accounts for this difference in

impressions, since there is none in the excitation of the nerve fibers, and the cat itself was initially deceived?

[2] If the major impact our sensations have upon us is not due to moral causes, then why [418] are we so sensitive to impressions which are meaningless to barbarians? why is music that most moves us but an empty noise to the ear of a Carib? Are his nerves of a different nature from ours, why are they not excited in the same way, or why do the same excitations affect some people so strongly and others hardly at all?

[3] As proof of the physical power of sounds, people refer to the cure of Tarantula bites. The example proves the very opposite. Those who have been stung by this insect do not, all of them, require absolute sounds or the same tunes as a cure, rather, each one of them requires tunes with a melody he knows and lyrics he can understand. An Italian requires Italian tunes, a Turk would require Turkish tunes. Each is affected only by accents with which he is familiar; his nerves respond to them only insofar as his mind inclines them to it: he has to understand the language in which he is being addressed if he is to be set in motion by what he is told. Bernier's Cantatas are said to have cured a French musician of the fever, they would have given one to a musician of any other nation.

[4] The same differences can be observed in all the other senses down to the crudest of them. Let a man with his hand resting and his glance focusing on one and the same object, alternately believe that it is and that it is not alive, although his senses are struck the same way, what a difference in the impression? The roundness, whiteness, firmness, gentle warmth, springy resistance, rhythmic swelling are pleasant but dull to the touch, once he no longer believes that underneath them he can feel the throbbing and beating of a heart full of life.

[5] I know only one sense the reactions of which are without any moral component: taste. That is why a sweet tooth is the dominant vice only of people who feel nothing.

[6] Whoever wishes to philosophize about the force of sensations must therefore begin by setting the purely sensory impressions apart from the intellectual and moral impressions we receive by way of the senses, but of which the senses are only the occasional causes: let him avoid the error of attributing to sensible objects a power which they either lack or derive from the affections of the soul

which they represent to us. Colors and sounds can do much [419] as representations and signs, and little as simple objects of sensation. Sequences of sounds or of chords may perhaps amuse me for a moment; but in order to delight and to move me, these sequences must provide something that is neither sound nor chord, and will move me in spite of myself. Even songs that are merely pleasant but say nothing also become wearisome; for it is not so much the ear that conveys pleasure to the heart as the heart that conveys it to the ear. I believe that if these ideas had been explored more adequately, much foolish speculation about ancient music could have been avoided. But in this century when every effort is made to materialize all the operations of the soul and to deprive human sentiments of all morality, I should be greatly surprised if the new philosophy did not prove as fatal to good taste as it does to virtue.

CHAPTER SIXTEEN

FALSE ANALOGY BETWEEN COLORS AND SOUNDS

[1] Physical observations have occasioned every kind of absurdity in discussions of the fine arts. The analysis of sound has revealed the same relations as has the analysis of light. Straightway people enthusiastically seized upon this analogy without regard for experience or reason. The systematizing spirit has jumbled everything and, since it proved impossible to paint for the ears, it was decided to sing to the eyes. I have seen the famous clavichord on which music was supposedly produced with colors; what a gross misunderstanding of how nature operates it was not to see that the effect of colors is due to their permanence and that of sounds to their succession.

[2] The full wealth of coloration is spread out all at once over the face of the earth. Everything is seen at first glance; but the more one looks, the more one is enchanted. One need only go on admiring and contemplating forever.

[3] The same is not true of sound: nature does not analyze it and separate out its harmonics; on the contrary, it hides them under the appearance of unison; or if, some[420]times, it does separate them in the modulated song of man or in the warbling of certain birds, it does so successively and one after the other; it inspires songs, not chords, it dictates melody, not harmony. Colors are the ornament of inanimate beings; all matter is colored; but sounds proclaim movement, the voice proclaims a being endowed with sense; only animate bodies sing. It is not the mechanical flutist that plays the flute, but the engineer who measured the flow of air and made the fingers move.

[4] Thus every sense has its own proper realm. The realm of music is time, that of painting is space. To multiply the number of sounds heard all at once, or to present colors one after the other, is to alter their economy, it is to substitute the eye for the ear, and the ear for the eye.

[5] You say; just as every color is determined by the angle of refraction of the ray that causes it, so is every sound determined by the number of vibrations of the sounding body in a given span of time. Now, since the relations between these angles and these numbers are the same, the analogy is obvious. Granted; but it is an analogy of reason, not of sensation, and [besides], it is not to the point. In the first place the angle of refraction is both perceptible and measurable whereas the number of vibrations is neither. Sounding bodies, being subject to the influence of the air, constantly change their size and the sounds they give forth. Colors last, sounds vanish, and one can never be certain that the sounds that arise next are the same as those that have just died away. Moreover, every color is absolute, independent, whereas every sound is for us only relative and distinct only by contrast. By itself a sound has no absolute character by which it might be recognized; it is low or high, loud or soft in relation to another sound; in itself it is none of these. Nor is a given sound by nature anything within the harmonic system: it is neither tonic, nor dominant, nor harmonic, nor fundamental; for all of these properties are only relationships, and since the entire system can vary from low to high, every sound changes its rank and position in the system as the system changes in degree. But the properties of colors are not at all functions of relationships. Yellow is yellow independently of red and of [421] blue, it is

everywhere perceptible and recognizable, and as soon as its angle of refraction has been determined we can be sure of obtaining the same yellow every time.

[6] Colors are not in the colored bodies but in the light; an object must be illuminated in order to be visible. Sounds also need a moving agent, and in order for them to exist, the sounding body has to be set in motion. Sight here enjoys a further advantage: for the constant emanation [of light] from the stars is the natural agency by which sight is acted upon, whereas nature by itself engenders few sounds and, short of believing in the harmony of the heavenly spheres, living beings are needed to produce it.

[7] Painting is thus seen to be closer to nature, while music is more closely related to human art. Music is also felt to [involve our] interest more than does painting precisely because it brings man closer to man and always gives us some idea about our own kind. Painting is often dead and inanimate, it can transport you to the middle of a desert; but as soon as vocal signs strike your ear, they herald a being like yourself, they are, so to speak, the organs of the soul, and if they also depict solitude they tell you that you are not alone in it. Birds whistle, man alone sings, and it is not possible to hear a song or a symphony without immediately telling oneself: another sentient being is present.

[8] One of the great advantages the musician enjoys is that he can paint things that cannot be heard, whereas the Painter cannot represent things that cannot be seen, and the greatest wonder of an art that acts solely through movement is that it can fashion it even into an image of repose. Sleep, the quiet of night, solitude, and silence itself have a place in the spectacles of music. It is known that noise can produce the effect of silence, and silence the effect of noise, as when one falls asleep while being read to in an even and monotonous voice and wakes up the moment it stops. But the effect of music on us is more profound in that it excites in us through one of the senses affects similar to those that can be aroused through another, and since this relation is perceptible only if the impression is strong, painting, which lacks the requisite force, cannot imitate music [422] as music imitates it. Though the whole of nature be asleep, he who contemplates it does not sleep, and the musician's art consists in substituting for the imperceptible image of the object that of the [e]motions which this object's presence excites in the heart of the beholder. Not only will it churn up the

sea, fan the flames of a conflagration, cause rivers to run, rain to fall, and streams to swell; but it will also depict the desolation of dreadful deserts, dusk the walls of a subterranean dungeon, appease the storm, clear and still the air and, from the orchestra, spread renewed freshness through the woodlands. It will not represent these things directly, but it will excite in the soul the very same sentiments which one experiences upon seeing them.

CHAPTER SEVENTEEN A MUSICIANS' ERROR THAT IS HARMFUL TO THEIR ART

Note how everything constantly brings us back to the moral effects about which I have spoken, and how far the musicians who account for the impact of sounds solely in terms of the action of air and the excitation of [nerve] fibers are from understanding wherein the force of this art consists. The more closely they assimilate it to purely physical impressions, the farther away they remove it from its origin, and the more they also deprive it of its primitive energy. By abandoning the accents of speech and adhering exclusively to the rules of harmony, music becomes noisier to the ear and less pleasing to the heart. It has already ceased to speak, soon it will no longer sing and then, for all of its chords and harmony, it will no longer have any effect on us.

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CHAPTER EIGHTEEN THAT THE MUSICAL SYSTEM OF THE GREEKS HAS NO RELATION WHATSOEVER TO OURS

[1] How did these changes come about? By a natural change in the character of languages. It is known that our harmony is a Gothic

invention. People who claim to discover the system of the Greeks in ours talk foolishness. The system of the Greeks was absolutely not harmonic in our sense of the term, except for what was required to tune instruments according to perfect consonances. All peoples with stringed instruments are forced to tune them by consonances, whereas those without them exhibit inflections in their songs which we call false because they do not fit into our system and we have no notations for them. This has been observed in the songs of American savages, and it should also have been observed in the various intervals of Greek music, if it had been studied with less partiality for our own music.

[2] The Greeks divided their Scale into tetrachords as we divide our keyboard into octaves, and the same divisions recurred regularly in each of their tetrachords as they do in each of our octaves; a similarity which would not have been preserved in the unity of the harmonic mode, and would not even have been imagined. But since one proceeds by smaller intervals when speaking than when singing, it was natural for them to view the repetition of tetrachords in their oral melody as we do the repetition of octaves in our harmonic melody.

[3] The only consonances they acknowledged are the consonances we call perfect; they excluded thirds and sixths from this class. Why did they do so? Because they did not know, or at least in practice excluded, the minor interval of the whole tone, and their consonances were not tempered in any degree; as a consequence all their major thirds were too great and their minor thirds [424] too small by a comma, and so their major and minor sixths were reciprocally altered in the same way. Now, try to imagine what notions of harmony and what harmonic modes are possible, once thirds and sixths are excluded from the class of consonances! If, with a true sense for harmony, they had perceived the consonances which they did allow, then these consonances would at least have been implicit in their songs, and the unsounded consonance of the root sequences would have lent its name to the diatonic sequences it implied. Far from having fewer consonances than we, they would have had more; and, for example, since they understood the bass *do sol*, they would have called the second *do re* a consonance.

[4] But, someone might object, why diatonic sequences? Because of an instinct that inclines us to choose the most convenient inflec-

tions in an accented and singing language: because the voice took a middle course between the extreme glottal modifications that are required in order constantly to sound the large intervals of consonances on the one hand, and the difficulty of controlling intonation in the very complicated relationships of smaller intervals on the other, it naturally hit on intervals smaller than consonances and simpler than commas; which is not to say that smaller intervals did not also serve a function in the more pathetic forms.

CHAPTER NINETEEN

HOW MUSIC DEGENERATED

[1] As language became perfected, melody imperceptibly lost some of its former vigor by imposing new rules on itself, and the calculation of intervals replaced delicacy of inflection. This, for example, is how the enharmonic genus gradually fell into disuse. Once theater had assumed a fixed form, all singing in it was restricted to prescribed modes; and as the number of rules for imitation increased, imitative language weakened. [425]

[2] The study of philosophy and the progress of reasoning, having perfected grammar, deprived language of the lively and passionate tone that had originally made it so songlike. Composers who at first had been in the pay of Poets and worked only under their direction and as it were at their dictation became independent of them at the time of Menallipides and Philoxenus, and it is about this license that Music complains so bitterly in a comedy by Pherecrates a passage of which Plutarch has preserved for us. Thus melody, as it began to be less closely tied to discourse, imperceptibly assumed a separate existence, and music became increasingly independent of words. This was also the period when the wonders gradually ceased which it had wrought when it was but the accent and the harmony of poetry, and when it endowed poetry with a power over the passions which speech has since exercised only over the reason. Indeed, once Greece abounded in Sophists and Philosophers it no longer had famous poets or musicians. In cultivating

the art of convincing [men], the art of moving [them] was lost. Even Plato, jealous of Homer and Euripides, decried the one and was incapable of imitating the other.

[3] Soon servitude added its influence to that of philosophy. Greece in chains lost the fire that warms only free souls, and she never recovered for the praise of her tyrants the tone in which she had sung her Heroes. The influx of Romans further diluted what harmony and accent the language had kept. Latin, a more muted and less musical tongue, harmed music when it adopted it. The way people sang in the capital came little by little to affect the singing in the provinces; the theaters of Rome had a harmful effect on those of Athens; by the time Nero was carrying off prizes Greece had ceased to deserve them; and the same melody shared by two languages suited each of them less well.

[4] Finally the catastrophe occurred which destroyed the progress of the human spirit, without eliminating the vices that were its product. Europe, overrun by barbarians and subjugated by ignorant men, at one and the same time lost her sciences, her arts, and the universal instrument of both, to wit a harmonious and perfected language. These crude men whom the North had fathered gradually accustomed all ears to the coarseness of their [vocal] organ; their harsh and accent-less voice was noisy without being sonorous. [426] The Emperor Julian compared the speech of the Gauls to the croaking of frogs. Since all of their articulations were as grating as their voices were nasal and dull, they could impart only one kind of brilliance to their singing, which was to stress the vowel sounds in order to cover up the profusion and the harshness of the consonants.

[5] This noisy singing, combined with the inflexibility of their [vocal] organ, compelled these newcomers as well as the subject peoples who imitated them to make all sounds more sustained in order to make them intelligible. Labored articulation and stressed sounds contributed equally to rob melody of all sense of measure and rhythm; Since the hardest thing to pronounce was always the transition from one sound to the next, the best they could do was to pause at each sound as long as possible, increase its volume, and let it burst forth as vehemently as possible. Soon song was nothing but a dreary and slow succession of drawled and shouted sounds, devoid alike of sweetness, measure, and grace; and although some scholars have maintained that in Latin singing the distinction

between long and short syllables had to be observed, it is in any event certain that verse was sung like prose, and that not feet, nor rhythm, nor any kind of measured song were of any further concern.

[6] Song thus deprived of all melody and consisting solely in the volume and duration of sounds must finally have suggested ways in which it might be made still more resonant with the aid of consonances. Several voices constantly drawing out in unison endlessly long sounds chanced upon a few chords which made the noise seem pleasant to them by accentuating it, and this is how the use of descant and of counterpoint began.

[7] I do not know how many centuries musicians kept going in circles around vain questions which they debated because they did not know the principle of an effect which they knew [perfectly well]. Even the most tireless reader could not stand eight to ten long chapters of verbiage in Jean de Muris for the sake of finding out whether it is the fifth or the fourth which should be the lower interval in an octave divided into two consonances; and four hundred years later, equally dreary lists of all the basses that must carry a sixth instead of a fifth are still to be found in Bontempi. In the meantime harmony imperceptibly took the direction prescribed to it by analysis, until finally the invention of the minor mode and of dissonances introduced into it the arbitrariness in which it abounds, and which only prejudice prevents us from perceiving.*

* By reducing the whole of harmony to the very simple principle of the resonance of strings in their aliquot [or constituent] parts, M. Rameau bases the minor mode and the dissonance on his supposed findings that a vibrating sonorous string induces vibrations in longer strings at the lower twelfth and the lower major seventeenth. According to him these strings vibrate and quiver over their entire length, but do not resonate. That strikes me as rather odd physics; it is as if one were to say that the sun is shining but it is impossible to see anything.

Since these longer strings produce only the sound of the highest note because they are divided, vibrate, and resonate in unison with it, they blend their sound with its sounds, and thus seem not to emit any sound of their own. The error consists in believing that they were seen to vibrate over their entire length, and in not having observed the nodes carefully. We know from experience, and M. Tartini has confirmed it, that two strings which form any given harmonic interval can make their fundamental heard in the bass even without a third string: but a single string has no other fundamental than its own; it produces no resonance or vibration in its multiples, but only in its unison and its aliquot [or constituent] parts. Since sound has no other cause than the vibration of the sounding body, and since the effect always follows the unimpeded action of the cause, it is nonsense to separate vibrations from resonance.

[8] Once melody was forgotten and the attention of musicians had focused entirely on harmony, everything gradually turned toward this new object; form, mode, scale, everything acquired a new complexion; harmonic successions came to determine the sequence of parts. Once this sequence had usurped the name of melody it indeed became impossible to fail to recognize its mother's features in this new melody, and as our musical system thus gradually became purely harmonic, it is not surprising that spoken accent should have suffered as a result, and that for us music should have lost almost all of its energy.

[9] This is how singing gradually became an art entirely separate from speech from which it originates, how the harmonic aspects of sounds caused the inflections of the voice to be forgotten, and how finally music, restricted to the exclusively physical effect of the combinations of vibrations, came to be deprived of the moral effects it used to produce when it was doubly the voice of nature.

[428]

CHAPTER TWENTY

THE RELATION OF LANGUAGES TO GOVERNMENTS

[1] These progresses are neither accidental nor arbitrary, they are due to the vicissitudes of things. Languages are naturally formed according to men's needs; they change and deteriorate as these same needs change. In ancient times when persuasion occupied the place of public force eloquence was necessary. Of what use would it be today, when public force replaces persuasion? It takes neither art nor figures of speech to say *such is my pleasure*. What speeches then remain to be addressed to the people assembled? Sermons. And why should those who deliver them care whether they persuade the people, since it does not award privileges? Popular languages have become as thoroughly useless to us as has eloquence. Societies have assumed their final forms; nothing can be changed in them any more except by arms and cash, and since there is nothing left to say to the people but, *give money*, it is said with posters on street

corners or with soldiers in private homes; for this there is no need to assemble anyone: on the contrary, subjects must be kept scattered; this is the first maxim of modern politics.

[2] Some languages are conducive to freedom; they are the sonorous, rhythmic, harmonious languages in which speech can be made out from quite far. Ours are made for the buzz in the Sultan's Council Chamber. Our preachers agonize, work themselves into a sweat in their churches, without anyone's having any idea of what they have said. After they have worn themselves out shouting for an hour, they leave the pulpit half-dead. Surely it was not worth the effort.

[3] Among the ancients it was easy to be heard by the people in a public square; one could speak in one for an entire day without strain. Generals harangued their troops; they could be heard and they did not wear themselves out. Modern historians who have tried to include harangues in their histories have made themselves a laughingstock. [429] Imagine someone delivering a harangue in French to the people of Paris in the Place Vendôme. Let him shout at the top of his voice, people will hear that he is shouting, but they will not make out a single word. Herodotus read his history to the people of Greece assembled out of doors and there was applause on all sides. Nowadays an academician who reads a paper at a public session can hardly be heard at the back of the hall. The reason there are fewer mountebanks in the marketplaces of France than of Italy is not that in France people listen to them less, but only that they cannot hear them as well. M. d'Alembert believes that a French recitative could be delivered in the Italian manner; it would have to be spoken directly into the ear, or it would simply not be heard. Now, I maintain that any language in which it is not possible to make oneself understood by the people assembled is a servile language; it is impossible for a people to remain free and speak that language.

[4] I shall conclude these reflections which, though superficial, may give rise to more profound ones, with the passage that suggested them to me.

[5] *To note and to show by means of examples the extent to which a people's character, morals, and interests influence its Language would provide matter for a rather philosophical inquiry.**

* *Remarques sur la gram[maire] génér[ale] et raison[née]*, by M. Duclos, p. 11.

He therefore inserted “hope” between “adore” and “die.” Even this seemed inadequate, and he re-worked the ending massively. He now summarized his difference with Leibniz and Pope as follows

*Someday all will be good [or: well], such is our hope;
All is good [or: well] now, such is the illusion.*

and now ends the poem

*Un calife autrefois, à son heure dernière,
Au Dieu qu'il adorait dit pour toute prière;
“Je t'apporte, ô seul roi, seul être illimité,
Tout ce que tu n'as pas dans ton immensité,
Les défauts, les regrets, les maux, et l'ignorance.”
Mais il pouvait encore ajouter, “l'espérance.”*

Once a Caliph, in his final hour,
To the God he adored said as his only prayer,
“I bring you, O sole king, sole boundless being,
All that, in your immensity, you have not,
Failings, regrets, evils, and ignorance.”
But he could also have added, *hope*.

In what appears to have been Voltaire's own copy of the poem, the lines

*Someday all will be good [or: well], such is our hope;
All is good [or: well] now, such is the illusion!*

were changed in his own hand to read

*Someday all will be good [or: well], what a frail hope!
All is good [or: well], what an illusion!*

and the final period of the last line is changed into a question mark:

But could he also have added *hope*?

followed by a long note about the widely held belief in the immortality of the individual soul. (See George R. Havens, “Voltaire's Pessimistic Revision of his Conclusion of his *Poème sur le désastre de Lisbonne*,” *Modern Language Notes* (1929), 44:489–493.)

ESSAY ON THE ORIGIN OF LANGUAGES (pages 247–299)

The *Essay on the Origin of Languages* remained unpublished during Rousseau's lifetime, although he had at one time planned to bring it out in a volume that was also to contain a short essay, *On Theatrical*

Imitation, which for the most part summarizes and paraphrases Plato's discussions of imitation in the *Republic* and the *Laws*, and a prose poem, *The Levite of Ephraim*, inspired by the story told at the end of the book of *Judges*. In a surviving draft of the preface for this proposed volume, Rousseau says that what became the present *Essay* had initially been "but a fragment of the *Discourse* on inequality," which he decided to omit from the final version of the *Discourse* because it "was too long and out of place." He was at least in part prompted to expand and recast it by Rameau's attacks on the articles on musical subjects which he had written for the *Encyclopedia*, and he may well have reworked the text on several occasions. It is certainly one of his most carefully wrought writings.

Scholars have been divided over whether what he says about pity in this *Essay* and what he had said about it in the *Second Discourse* indicates a change in his views, or whether, as seems more natural and convincing, these differences are best understood in the light of differences in perspective and intention between the two works. In any event, the central problem which he explores throughout the *Essay*, as he had especially in the *Second Discourse*, is the problem of the relations between what he frequently refers to as the *physical* and the *moral*.

There are at present two authoritative editions of this *Essai sur l'origine des langues, où il est parlé de la mélodie et de l'imitation musicale*: one by Charles Porset (Ducros, Bordeaux, 1970); one by Jean Starobinski (Collection "Folio," Gallimard, Paris, 1990). Starobinski's edition has now been incorporated in vol. v of OC. The first edition of the present translation (see "Preface", in Jean-Jacques Rousseau, *The First and Second Discourses, Together with the Replies to Critics and Essay on the Origin of Languages*, newly edited, translated and annotated by Victor Gourevitch, Harper & Row, New York, 1986) was based on the Porset edition; this version of the translation takes full account of the more recent and complete Starobinski edition. I have also consulted Antonio Verri's Italian translation in his *Origine delle lingue e civiltà in Rousseau* (Longo, Ravenna, 1970), pp. 150–274, and the German translation in E. Koch et al., *Rousseau, Sozialphilosophische und Politische Schriften* (Winkler, Munich, 1981), pp. 162–221.

The numerals preceding the following notes indicate the chapter, the bracketed numbers the paragraph in which the passage under consideration may be found.

Title page **Citizen of Geneva** appears on Rousseau's manuscript of this *Essay*, but was crossed out at a later time; it is not clear when or by whose hand: André Masson, "Questions de chronologie rousseauiste," *Annales Jean-Jacques Rousseau* (1930), 9:37–61, p. 47, and Jean

Starobinski, in the Introduction to his edition of the *Essay*, OC v, p. cc; Rousseau explained that he used this title only for what might be called political works (*NH*, 2nd Preface, OC II, 27f.

1 [2] As soon as one man . . . instinct suggested Parallels Condillac, *Essay on the Origin of Human Knowledge* pt. II, sec. I, ch. I, § 2.

1 [3] men dispersed See this *Essay*, 9 [1]*.

1 [4] Love . . . inventor of drawing . . . invented speech Pliny the Elder (AD 23–79), in *Natural History* XXXV, 43, 12, mentions the tradition that drawing was “invented” by a girl tracing the outline of her lover’s face (Porset); in 9 [35] Rousseau traces much of the early development of language to love.

1 [6] the art of pantomime Or of conveying attitudes, feelings, and passions by means of gestures and movements alone; hence an enacted picture, pure spectacle. See Rousseau’s article “Pantomime” in his *Dictionnaire de musique* (OC v, 603–1191); cp. Condillac, *Essay* pt. II, sect. I, ch. I, § 11. grammars The prevailing view of grammar is well conveyed in the opening sentences of the so-called *Port Royal Grammar*: “Grammar is the Art of speaking. To speak is to explain one’s thoughts by means of signs which men invented to that end. The most convenient such signs have been found to be sounds and words [*voix*]. But because sounds are transient, other signs were invented to make them lasting and visible, and these are the written characters which the Greek call ‘grammata,’ from which came the word *Grammar*”: *Grammaire générale et raisonnée* (*General and Systematic Grammar*), by Antoine Arnauld and Claude Lancelot, first edition 1660, third revised and expanded edition 1676, reissued by R. E. Brekle (Frommann, 1966), p. 5; Rousseau worked with the 1754 edition, which included the Commentary by his friend Charles Pinot Duclos. the symbols of the Egyptians Egyptian hieroglyphs are “allegorical figures” (see this *Essay* 5 [2]). The Rosetta stone, with writing in Greek and in Egyptian hieroglyphs, was found in 1799, and by the time of his early death, J. F. Champollion (1790–1832) had laid the foundation for deciphering the hieroglyphs.

1 [7] Consult ancient history Sextus, son of Lucius Tarquin, surnamed “Superbus,” tyrant of Rome (530–510 BC), sent to his father for advice on how to subdue the Gabii. Tarquin walked through a field with the messenger, lopping off the heads of the flowers that stood out above the others, and so conveyed to his son that he should decimate the first families (Livy, *Histories* I, 54; Ovid, *Fasti* II, 701–710). Much the same story is told of Thrasybulus, tyrant of Miletus, who, when he was asked by Periander (625–585 BC), tyrant of Corinth, how best, most beautifully, and most safely to rule, took Periander’s messen-

ger for a walk in a field and, while they talked of other things, lopped off the tallest and best grown, the most beautiful ears of corn (Herodotus, *Histories* v, 92; Aristotle reverses the roles of the two tyrants, *Politics* iii, 13, 1284a 25–32, cp. v, 11, 1313a 38–41; see also Shakespeare, *King Richard II*, iii, iv, 33–36). Alexander the Great (356–323 BC), reading his mother's latest plea that he curb his largess toward friends and associates, realized that his friend Hephaestion happened also to have read her letter. Alexander put his seal ring over his friend's lips to indicate that he was not to tell anyone that his mother thought his generosity excessive (Plutarch, *Life of Alexander*, 39). Diogenes the Cynic (fl. 360 BC), upon hearing someone deny the reality of motion, got up and walked away (Diogenes Laertius, *Lives* vi, 39). Zeno (fl. 450 BC), the Eleatic philosopher, challenged the common-sense belief in the reality of motion; his best-known paradox is that fleet-footed Achilles cannot overtake a turtle with a headstart on him (Aristotle, *Physics* vi, 9, 239b 14). When Darius (c. 558–485 BC), king of Persia, invaded the land of the Scythians in 512, a Scythian messenger brought him the gifts which Rousseau mentions. Darius took them as a sign that the Scythians were ready to surrender; his adviser Gobrias took them to say: Unless you Persians fly away like birds, or burrow underground like mice, or jump into the water like frogs, you will never get home, but will be shot here by our arrows. Darius accepted Gobrias's interpretation and, as Rousseau says, hastened to leave Scythia for home (Herodotus, *Histories* iv, 131f.). Rousseau makes the same point, citing the same examples, in *Emile* (iv, OC iv, 647 f., tr. 332f.).

1 [8] Levite of Ephraim *Judges* 19, 20; Rousseau wrote a prose poem recounting this episode, which he had intended to publish together with this *Essay on the Origin of Languages*. King Saul II *Samuel* 11:7; the story in many particulars parallels that of the Levite of Ephraim. Phryne acquitted "Hyperides, while defending Phrynê . . . caused her to be brought where all could see her; tearing off her undervests he laid bare her bosom and broke into such piteous lamentation . . . that he caused the judges to feel superstitious fear of this handmaid and ministrant of Aphrodite . . ." Athenaeus (AD c. 230), *The Deipnosophists* xiii, 590c (translated by Ch. B. Gulick).

1 [9] Horace's judgment "The mind is stirred less vividly by what finds entrance through the ears / than by what is brought before the trusty eyes . . ." *On the Art of Poetry*, lines 180f. (translated by H. Rushton Fairclough, slightly altered). The Abbé Du Bos had quoted these lines in support of his claim that paintings and, in general, things seen, move us more immediately and more profoundly than does poetry and, generally speaking, than do things heard, because instinct and

experience alike lead us to trust sight more than we do hearing, eyewitnesses more than we do hearsay. In arguing for the superior power of things seen to move us, Du Bos goes so far as to maintain that a tragedy that moves us deeply when we see it performed will scarcely move us at all when we read it; and he adds that the sight of a wounded man bleeding but silent will move us far more than will the cries of a man we know to be wounded, but whose wound we cannot see. “Metaphorically speaking, one might say that the eye is closer to the soul than is the ear”: *Réflexions sur la poésie et sur la peinture* (1719), I, 40. His view that a tragedy has the power to move us only when we see it, but not when we read it, directly contradicts Aristotle (*Poetics* VI, 1450b 16–20) and common experience. Rousseau, in direct contradiction to Du Bos, asserts that the mere sight of a wounded man will not move us as much as will his cries: “Suppose a situation of perfectly well-known pain, you will not be easily moved to tears at the sight of the afflicted person; but give him the time to tell you everything he feels and you will soon burst out in tears. Only thus do the scenes of tragedy produce their effect” (I [10]).

I [10]* I have said elsewhere “I hear it said that tragedy leads to pity through fear; so be it; but what is this pity? A fleeting and vain emotion that lasts no longer than the illusion which produced it; a vestige of natural sentiment soon stifled by the passions; a sterile pity which feeds on a few tears and which has never produced the slightest act of humanity. Thus the sanguinary Sulla cried at the account of evils he had not himself committed. Thus the tyrant of Pherae hid at the theater for fear of being seen to moan with Andromache and Priam while he heard without emotion the cries of so many unfortunates slain daily by his orders. Tacitus reports that Valerius Asiaticus, falsely accused by the order of Messalina, who wanted him to perish, defended himself before the Emperor in a way that touched this prince very deeply and drew tears from Messalina herself. She went into the next room to regain her composure after having, in the midst of her tears, whispered a warning to Vitellius not to let the accused escape. I never see one of those weeping ladies in the boxes at the theatre, so proud of their tears, without thinking of the tears of Messalina for poor Valerius Asiaticus”: *Lettre à M. d’Alembert sur les spectacles* (Fuchs ed., p. 32; Bloom tr. [slightly altered], pp. 24f.; the OC edition omits this important addition to the 1782 printing of the *Letter* because the editor could not locate a manuscript version of it: OC V, 1319; see also *Second Discourse* I [36]).

I [11] M. Pereyre Giacobbo Rodriguez Pereira’s (1715–1780) dramatic success in teaching the deaf not only to sign, but also to speak and to

read and write, was widely admired; Buffon speaks of it at the end of his discussion of hearing in *De la nature l'homme* (*On the Nature of Man*; 1754, Duchet edition, pp. 201f.).

1 [12] Chardin says In *Voyages*, partially reprinted as *De Paris à Ispahan*, edited by Stéphane Yerasimos (Maspero, Paris, 1953), vol. II, p. 208.

1 [14] Animals have a structure more than adequate Thus, too, Locke, *Essay Concerning Human Understanding*, II, 11, § xi; Descartes, *Discourse on Method* v (penultimate paragraph), and Letter to Morus, 5 February 1649 (ante-penultimate paragraph, quoted by Gilson in his edition of the *Discourse on Method*, pp. 427f.); and cp. *Second Discourse*, N x [5]. they say that it can be explained For example, the materialist Julien Offroy de la Mettrie (1709–1751) in his *L'Homme machine*, 1748 (*Man a Machine*; edited by A. Vartanian [Princeton University Press, Princeton, 1960]), pp. 160f. (Porset).

2 [1] [*voix*] It is difficult to find a single idiomatic English equivalent for Rousseau's use of this term; here, and frequently throughout this *Essay*, *voix* means "voiced sound," "utterance," "vocalization," or even "phonation"; however, he does not here explicitly draw the distinction he draws in *Emile* between (1) the speaking or articulate voice, (2) the singing or melodic voice, and (3) the passionate or accented voice (OC IV, 404f., tr. 148f.). (1) corresponds to the traditional meaning of "voice" as "the voiced letters," or the vowels (see, e.g., Quintilian, *Institutes* I, v, 1), and Montaigne writes, *Il y a le nom et la chose: le nom c'est une voix qui remarque et signifie la chose* ("Of Glory," *Essays* II, 16; Montaigne, OC 601, tr. 468), where *voix* means "word" or "name," but also suggests "mere breath," as it does in the parallel passage in Shakespeare: "What is that honor? Air" (Falstaff, in *King Henry IV* [part I], v: i, 143f.). Regarding (2), the singing or melodic voice, see *Dictionnaire de musique*, "Voix." And (3) the passionate or accented voice is most fully discussed in the present *Essay*: see also 5 [12].

2 [2] It is claimed that men invented speech in order to express their needs For example, by Condillac, *Essay* pt. II, sec. I, ch. I, § I, and ch. 10, § 103. Rousseau spells out his criticism of this view more fully in *Second Discourse* I [25].

3 [1] . . . Tropes. Figurative language Rousseau here uses "trope," "figure," and "figurative language" interchangeably, to refer, as he goes on to explain, to transpositions of the "literal," "proper," or "true" meaning of a word or expression, as, for example, when we speak of the arm of a chair.

3 [3] *Giants* See *Genesis* 6:4; *Numbers* 13:32, 33; *Deuteronomy* 2:20, 21; *I Samuel* 14:4; the references to men of gigantic size and to the

Patagonians “true or false,” *Second Discourse*, N X [1] and [11]; the references to the Cyclopes, this *Essay* 9 [7]; Hesiod, *Theogony* 185 (and context); Lucretius, *On the Nature of Things* vi, 673–679; and cp. Vico, *New Science*, §§ 121, 243, 338.

4 [1] Father Lamy Father Bernard Lamy (1640–1715), after speculating about how men who had dropped from the sky or risen from the earth might have invented language and reporting the Greeks’ conjectures on this question, adds that we, for our part, know from Scripture that men have language as a benefit from God: *La Rhétorique, ou l’art de parler*, chs. 4, 13. meter or quantity “In music as well as in prosody this term refers not to the number of notes or of syllables, but to their relative duration. Quantity produces rhythm, just as accent produces intonations: from rhythm and intonation result melody” (*Dictionnaire de Musique*, “Quantity”).

4 [4] many synonyms Cp. *Second Discourse* 1 [29] and [31]. persuade without convincing In the sense in which to persuade is to move to action, and to convince is to prove or demonstrate. cp. this *Essay* 19 [2]: “In cultivating the art of convincing [men], the art of moving [them] was lost.” See also Editorial Note to *Voltaire* [30]. Plato’s *Cratylus* In which Socrates, at times playfully, explores the question of whether names are natural or conventional.

5 [3] a twofold convention One regarding the relation between words or sentences and their objects: this animal is called “dog”; and another regarding the relation between words or sentences and their written representations: “dog” is written d-o-g. See also the Fragment on *Pronunciation*, OC II, 1149.

5 [5] savage . . . barbarian . . . and . . . civilized peoples The same distinction as in the *Second Discourse* II [20]; it is enlarged upon in this *Essay* 9 [19]. Rousseau planned to organize a “History of Morals” in terms of it (*Fragments politiques*, OC III, 560, § 24); it is based on Montesquieu’s distinction between “savages” as small, scattered nations, and “barbarians” as small, united nations; savage and barbarian peoples live by *moeurs* or morals, customs, and traditions, whereas civilized peoples, i.e. peoples in civil societies, live by laws (*Of the Spirit of Laws* XVIII: 11).

5 [7] Tchelminar or Chihil-Minar, the ancient name of Persepolis. Chardin *Voyages du Chevalier Chardin en Perse et Autres Lieux de l’Orient* (Amsterdam, 1735, enlarged edn.), vol. II, pp. 167f. The cuneiform writing Chardin here describes was not fully deciphered until 1846. The *Parsees* Chardin mentions in the second note to this paragraph are the descendants of the ancient Persians who, even after the Muslim conquest of the seventh century, continued to adhere to the Zoroastrian religion: they eat no meat (*Emile* II, OC IV, 411n., tr. 153n.).

5 [9] Cadmus For the story that Cadmus and the Phoenicians who came with him introduced the alphabet as well as much other knowledge to the Greeks, see Herodotus, *Histories* v, 58; Pliny, *Natural History* vii, 192.

5 [10]* See Pausanias, *Arcad[ia]* Rousseau's reference is in error; Pausanias speaks of this form of writing in his section on Eleia (*Travels* viii, 17, vi). Marius Victorinus (fl. AD 350), celebrated Roman grammarian and rhetorician, and teacher of St. Jerome. Rousseau's reference is to his *De arte grammatica*, Bk. I in *Grammatici Latini* (edited by Heinrich Keil, 7 vols. [Teubner, Leipzig, 1855–1880], vol. vi [1874], pp. 55f.). The Latin *versus* translates the Greek *boustrophedon*; Rousseau proposed to have this way of writing reintroduced in music (see his "Letter to Dr. Burney," October 1777, nos. 2 and 3; CC xl, 148–150).

5 [11] Palamedes One of the Greek leaders in the Trojan War; Simonides (556–468 BC), Greek lyric poet and philosopher or sophist; the tradition of their contributions to the Greek alphabet is reported by Pliny the Elder (*Natural History* vii, 56, 192); by Isidore of Seville (c. AD 570–636) (*Origins* i, 3, 9); by Marius Victorinus (*De arte grammatica*, in *Grammatici Latini* [Keil edn.], vi, 194). lustra or lusters, the five-year periods separating the purification of the entire Roman people after each census.

5 [12] the Gentlemen of Port Royal Antoine Arnauld and Claude Lancelot, the authors of the *General and Systematic Grammar*, commonly known as the *Port Royal Grammar*. Duclos's discussion and list of the vowels is found in Pt. I, ch. I of his Commentary to that *Grammar*.

5 [12]* Greek records *Vocales quas Graece septem, Romulus sex, usus posterior quinque commemorat y velut Graeca rejecta*. Mart[ianus] Capel[la] (fl. early fifth century); Rousseau here quotes from his *De Nuptiis Philologiae et Mercurii* (Porset), a work edited by the young Hugo Grotius.

6 [1] Bellerophon Proitos wanted to see Bellerophon dead; however "He shrank from killing him, since his heart was awed by such action . . . but sent him away to Lykia, and handed him murderous symbols which he inscribed in a folded tablet, enough to destroy his life, and told him to show it to his wife's father, that he might perish" (Homer, *Iliad* vi, 167–170, translated by Lattimore). Father Jean Hardouin (1646–1729), a learned Jesuit, among whose "paradoxes" were the claims that most ancient Greek and Roman texts were medieval forgeries, and that the New Testament had originally been written in Latin. Torquato Tasso (1544–1595), author of the heroic epic *Jerusalem*

Delivered. Rousseau translated portions of the poem (OC v, 1277–1295), and he quotes from it in a discussion of lying (*Rêveries* iv, OC i, 1038, tr. 56).

6 [2] compiled . . . rather late By Peisistratos in the second half of the sixth century BC.

7 Prosody From the Greek word for “accent,” prosody is the study of the elements and structures involved in the rhythmic aspects of speech and is traditionally a branch of grammar (see *Dictionnaire de Musique*, “Accent”).

7 [1]* Some scholars claim Porset points out that this note is specifically directed against the views of du Marsais, first set forth in his *Encyclopedia* article “Accent.” from Cicero’s . . . *Of the Orator*. *Hanc diligentiam subsequitur modus etiam et forma verborum, quod iam vereor ne huic Catulo videatur esse puerile. Versus enim veteres illi in hac saluta oratione propemodum, hoc est numeros quosdam nobis esse adhibendos putaverunt; interspirationes enim, non defatigationes nostrae neque liberiorum notis, sed verborum et sententiarum modo interpunctas clausulas in orationibus esse voluerunt; idque princeps Isocrates instituisse fertur, ut inconditam antiquorum dicendi consuetudinem delectationis atque aurium causa, quem ad modum scribit discipulus eius Naucrates, numeris adstringeret. Namque haec duo musici, qui erant quondam idem poetae, machinati ad voluptatem sunt, versum atque cantum, ut et verborum numero et vocum modo delectatione vincerent aurium satietatem. Haec igitur duo, vocis dico moderationem et verborum conclusionem, quoad orationis severitas pati posset, a poetica ad eloquentiam traducenda duxerunt (III, xlv, 173f.).* from Isidore’s *Origins*: *Praeterea quaedam sententiarum notae apud celeberrimos auctores fuerunt, quasque antiqui ad distinctionem scripturarum carminibus et historiis apposuerunt. Nota est figura propria in litterae modum posita ad demonstrandum unamquamque verbis sententiarumque ac versuum rationem. Notae autem versibus apponuntur numero XXVI quae sunt nominibus infra scriptis, etc.* (Isidore, *Etymologiarum sive originum* [Oxford, 1911; edited by W. M. Lindsay], ch. XXI, 1).

7 [2] à [to] used as an article Presumably in the dative of the article, as in *à la*; *à le* and *à les* by contraction yield *au* and *aux*.

7 [2]** Buonmattei Benedetto Buonmattei (1581–1647), Italian grammarian.

7 [8] The ancient Hebrews The problems of biblical interpretation which this raises are discussed by Spinoza in *Tractatus Theologico-Politicus*, ch. 7 (in the middle).

9 [6] Everyone, it is said, considered himself to be master Cp. Hobbes, *De cive* i, 10, 11; Spinoza, *Tractatus Theologico-Politicus*, ch. 16 (beginning) and n. 26; cp. also *Second Discourse* i [35].

9 [7] the Cyclops The race of giant shepherds with one eye in the middle of their foreheads – hence their name – whose leader Polyphemus kept Odysseus and his companions prisoners in his cave by blocking its entrance with a huge boulder. He had devoured some of the men when Odysseus blinded him and, by a ruse, succeeded in escaping together with his surviving companions (Homer, *Odyssey* ix, 112–115); on the primitive existence of the Cyclopes, see Plato, *Laws* iii, 680 a–c; Aristotle, *Politics* i, 2, 1252b, 17ff., and *Nicomachean Ethics* x, 9, 1180a 25–32; Strabo, *Geography* xiii, 1, 24a. On the life of Odysseus and his companions among the Cyclopes as the image of life under despotic rule, see *SC* i 4 [3]; and Locke, *Treatises* ii, 19, § 228.

9 [8] Cain was a tiller *Genesis* 4:3. Noah planted a vineyard *Genesis* 9:20. Cain became a fugitive *Genesis* 4:12. the wandering life of Noah's descendants *Genesis* 10, 11. the Scythians in their wagons Herodotus, *Histories* iv, 46.

9 [9] lived solely off acorns Which Pelasgos taught them to eat (see Pausanias, *Travels* viii, “Arkadia,” i, vi); later Triptolemos taught agriculture to King Arkos – for whom the Pelasgians were now named Arkadians (*ib.* iv, i; cp. Plato, *Laws* iii, 782b). On the introduction of agriculture, see the *Second Discourse* ii [20]–[23].

9 [10] Abraham served a calf *Genesis* 18:7; Eumaeus served Ulysses piglets, not kids (Homer, *Odyssey* xiv, 72–80). Rebecca did the same or, more precisely, she instructed her youngest son, Jacob, to do so after overhearing her husband, Isaac, promise their older son, Esau, that he would be blessed if he brought him some meat (*Genesis* 27:9).

9 [11] first cake . . . the communion of mankind This striking remark refers to the transition from nomadic to settled life described in *Second Discourse* ii [22]; its biblical echoes – *Genesis* 18:6, cp. *Genesis* 19:3 – amplify the reference to the Abraham story in the preceding paragraph. Passover *Exodus* 12:39, 13:3–10, *Deuteronomy* 16:8.

9 [12] Job's wealth . . . the Sabeans carried them off *Job* 1:3, 14f.

9 [13] Scripture lists ten generations Ten generations separate Noah's children and Abraham (*Genesis* 10:1, 11:10–29).

9 [14] Adam spoke *Genesis* 2:19–20, 3:10, 3:12. Noah spoke *Genesis* 9:25–27. the common language perished *Genesis* 11:1, 11:6. even if there had never been a tower of [B]abel As, indeed, the biblical account suggests (*Genesis* 10:5, 10:20, 10:31–32).

9 [15] born of the earth The earth-born giants, in Hesiod (*Theogony* 185); Pelasgos, in Pausanias (*Travels* viii, i, iv); Deucalion's earth-born generation, in Ovid (*Metamorphoses* i, 384–413); Cadmus's (*ib.* iii, 106–115); see also Plato (*Republic* iii, 414d–e, cp. *Menexenus* 237d–238a) and Isocrates (*Panegyricus* 24); Lucretius, *On the Nature of Things* (v,

821–823, 1402, 1411); consider also Hobbes, *De cive* VIII, 1, and this *Essay* 9 [22]: “assume men issuing from the hands of nature,” and 9 [36]: “were men born of the earth before that time?”

9 [18] the ark and the tabernacle of Moses *Exodus* 26:14, *Numbers* 4:25. Moses . . . appears to have disapproved of agriculture In writing the Pentateuch, he has God reject his [Cain’s] offerings *Genesis* 4:2–7.

9 [20] the earliest morals “Earliest” here translates *premier(s)*, which has elsewhere consistently been translated “first,” as in “first ages,” or “first men”; in the present context *moeurs*, which has been translated “morals” throughout, is best understood as “ways [of life].”

9 [22] Assume perpetual spring As, Pufendorf says, the pagan poets did, not knowing of the earthly paradise (*Droit* II, 2, § 2); indeed, he borrowed the expression “perpetual spring” from Ovid’s description of it (*Metamorphoses* I, 107).

9 [23] He who willed . . . inclined the globe’s axis Which makes for the cycle of the seasons. Rousseau’s reflections on the subject are developed further in an important fragment, *OC* III, 529–533.

9 [25] Chaldea The province of southern Babylonia situated between the lower Euphrates, the head of the Persian Gulf, and the Arabian Desert. Phoenicia The mountainous strip along the eastern shore of the Mediterranean Sea; the Phoenicians were great travelers and traders.

9 [26] It is natural, it is said By Montesquieu, *Of the Spirit of Laws* XVIII: 3; Rousseau’s discussion of the influence of terrain on modes of life takes up many of the points, examples and even expressions in this book *Of the Spirit of Laws*. Magna Graecia The Greek mainland cities together with their far-flung colonies. the Attic people . . . called itself Autochthonous For example, Isocrates, in *Panegyricus* 24; the Athenians alone withstood the invasions by the Doric tribes from the North. the factory of mankind “The Goth Jornandes has called northern Europe the factory of mankind. I would rather call it the factory of the instruments that break the chains forged in the south. It is there that are formed the valiant nations that set out from their country to destroy tyrants and slaves, and to teach men that nature having made them equal, reason could make them dependent only for the sake of their happiness”: Montesquieu, *Spirit of the Laws* XVII, 5 (near the end).

9 [27] The . . . ancient traditions about natural disasters E.g., *Genesis* 7:10–8:14; Plato, *Statesman* 269a–274e, *Timaeus* 22a–25d, *Critias* 112a, *Laws* III 677a–d; Aristotle, *Metaphysics* XII, 8, 1074a 10–14, *Politics* VII, 10, 1329b 25–30; Lucretius, *On the Nature of Things* V, 380–415; Ovid, *Metamorphoses* I, 253–312.

9 [29]* fugitive prehuman society Appears to be an allusion to Helvétius, *De l'esprit*, Discours premier, ch. 1. (Porset).

9 [30]* the well of the Oath or Beersheba, in *Genesis* 21:25–33.

9 [31] The chaos which the Poets feigned among the elements See Hesiod, *Theogony* 116; Ovid, *Metamorphoses* 1, 5–32; cp. Lucretius, *On the Nature of Things* II, 118–122. Descartes uses the same expression – “a chaos as confused as the poets might feign” – to describe the starting point of his own cosmology, in *Discourse on Method* v (Gilson edn.), 42: 23f. did reign among its productions Lucretius, *op. cit.*, v, 243f., 380f.; and for Rousseau's argument in this paragraph and the next, consider *ib.*, v, 380–415.

9 [32]* It is claimed by Buffon in “Le Boeuf” (“The Ox,” 1753), *OP*, pp. 358 b 6–359 a 15; “Les animaux carnivores” (“The Carnivorous Animals,” 1758), *ib.* pp. 366 b 25–367 a 10, 373 a 32–377 a 44; and “Le Lièvre” (“The Hare,” 1765), *ib.* pp. 363–365. For a discussion, see V. Gourevitch, “‘The First Times’ in Rousseau's *Essay on the Origin of Languages*,” *Graduate Faculty Philosophy Journal* (1986) 11:123–146, pp. 136–141.

9 [36]* The first men . . . marry their sisters After canvassing this traditional problem at length, Pufendorf concludes that such marriages cannot be held to violate either natural right or the biblical account of the beginnings (*Droit* VI, 1, § xxxiv); so, too, Grotius, *Right* II, 5, § xiii, ¶5, 6, 7; and even Cumberland, *Loix* VIII, § 9; cp. Plato, *Republic* v, 460e–461e with *Laws* VIII, 838a–c.

12 [1] Around the fountains which I have mentioned In this *Essay* 9 [35]–[36].

12 [2] The first stories . . . in verse For example, Plutarch: “There was a time when people used for the currency of speech, verses and tunes and songs, converting into music and poetry, all history, all philosophy, every passion, and to speak generally, every circumstance that required more dignified utterance. For things that nowadays few people listen to, everybody then used to hear, and took pleasure in their being sung; ‘ploughmen and flowers too,’ as Pindar hath it”: *On the Pythian Responses* (translated by C. W. King), 24f. says Strabo (63 BC–AD 24), in *Geography* 1, 2, 6.

12 [2]** *Architas and Aristoxenus Architas atque Aristoxenus etiam subjectam grammaticen musicae putaverunt, et eosdem utriusque rei praeceptores fuisse . . . Tum Eupolis apud quem Prodamus et musicen et litteras docet. Et Maricas, qui est Hyperbolus, nihil se ex musicis scire nisi litteras confitetur*, in M. Fabius Quintilian (AD c. 35–c. 100), *Institutes* 1, x, 17f. Rousseau's most striking departure from Quintilian's text is that he speaks of Architas and Aristoxenus, where Quintilian speaks of Architas

and Evenus. Architas (fl. c. 400 BC), Pythagorean philosopher and statesman who helped Plato escape from the court of Dionysius, tyrant of Syracuse (Plato, *Seventh Letter*, 350 a–b); Evenus (fl. c. 400 BC), poet, sophist, and rhetorician who taught “the virtue of man and citizen” for a mere 5 minae (Plato, *Apology of Socrates* 29b, cp. *Phaedo* 60d); Aristoxenus (fl. c. 318 BC), Aristotelian philosopher who held that judgment of musical intervals rests on what we perceive, and not, as the Pythagoreans maintained, on mathematical ratios; on *le jugement de l’oreille* rather than on *le calcul* is how Rousseau put it in the article “Aristoxéniens” of his *Dictionnaire de Musique*; see also “Intervalle” and “Pythagoréciens.” The disagreement between Rousseau and Rameau in many respects parallels that ancient quarrel between the Aristoxenians and the Pythagoreans. *Prodamus* and *Maricas* are dramatic characters in comedies by *Eupolis* (c. 445–411 BC); and, as Quintilian points out, the character called *Maricas* represents the fifth-century Athenian demagogue *Hyperbolus*.

12 [4] Pierre-Jean Burette (1664–1747), the physician and antiquary who wrote extensively on the music of the ancients, translated and commented on Plutarch’s dialogue *Of Music*, to which Rousseau refers in chapter 19 of this *Essay*.

12 [4]* Abbé Jean Terrasson (1670–1750), in *Dissertation critique sur l’Iliade d’Homère* (Porset). Amphion Son of Zeus and Antiope, whose music was said to have caused the stones to move into place by themselves and form the wall protecting Thebes; e.g., Pausanias, *Travels* IX, 30, iii.

12 [5] such very different instruments In the sense in which a singer’s voice is his “instrument.”

13 [1] a touching painting . . . an etching Before photography, etchings provided the only means for reproductions of the image. “Paintings are all fated to perish. Cold, heat, air, and worms have already destroyed many. It is up to etching to preserve what can be saved.” (Diderot, “Salon de 1765,” in *Salons* II, edited by Jean Seznec [Clarendon, Oxford, 1979], p. 227).

13 [5] the experiment with the prism Newton first reported his experiments analyzing natural light into its component colors in 1672. His full discussion appeared in the *Opticks, or a Treatise of the Reflections, Refractions, Inflections, and Colours of Light* (1704).

14 [2] harmony properly so called Rousseau develops the point at greater length in his *Examen de deux principes avancés par M. Rameau*: OC V, 345–366.

14 [4] M. Rameau contends Jean Philippe Rameau (1683–1764), in *Traité de l’harmonie* (1722), and in many subsequent writings; the

disagreement between Rousseau and Rameau was long-standing, and it led to sometimes acrimonious exchanges, not only between the principals, but also between their partisans and mediators. It was certainly embittered by personal pique and antipathy. But that should not obscure the fact that it involves fundamental issues in the theory of music and of the fine arts in general.

14 [7] if he wished to make frogs croak he would have to make them sing Starobinski thinks this is a direct jab at Rameau, who has a choir of frogs croak in his *Platée* (1745).

15 [3] Tarantula bites The bite of these poisonous spiders was said to cause sluggishness and melancholy which could be dispelled only by vigorous movements or dancing; hence the tarantella. Nicolas Bernier's (1664–1734) Cantatas Some of which Rousseau recalls studying and learning by heart in his early twenties (*Conf.* v, OC I, 184).

15 [5] one sense . . . without . . . moral component In writing this sharp criticism of gluttony, Rousseau may have remembered that the materialist La Mettrie had died in 1751 from overeating.

16 [1] The analysis of sound . . . the analysis of light Newton himself repeatedly called attention to possible correspondences between them: "May not the harmony and discord of Colours arise from the proportions of the Vibrations propagated through the Fibres of the optick Nerves into the Brain, as the harmony and discord of sound arise from the proportions of the Vibrations of the Air? For some Colours, if they be view'd together, are agreeable to one another, as those of Gold and Indigo, and others disagree" (*Opticks* III, pt. i, qu. 14; see also I, II, prop. III, prob. I; II, I, ob. 14; II, III, prop. XVI). the famous clavichord By the Jesuit Louis Bertrand Castel (1688–1757), teacher of mathematics and physics, who in a work entitled *Optique des couleurs* (1740) suggested matching tones to colors and so to "play" pictures. He built a prototype of such an "ocular clavichord" and exhibited it in Paris in 1739, but he never succeeded in making it play properly. Rousseau had known Castel when he first came to Paris (*Conf.* VII, OC I, 283, 288f., 326). Castel published a criticism of Rousseau's *Letter on French Music*, and another of the *Second Discourse*, entitled *L'Homme moral opposé à l'homme physique de M. R**** (Toulouse, 1756).

16 [3] not the mechanical flutist . . . but the engineer Jacques de Vaucanson (1709–1782) built and, in 1738, exhibited a widely admired mechanical toy flutist. Voltaire compared its maker to Prometheus; so did La Mettrie, who thought the device proved the possibility of a talking machine and hence of his materialist understanding of man (in *L'homme machine*, ed. Vartanian, p. 190). Rousseau had met Vaucanson: see his letter to de Conzié of 17 January 1742 (CC I, 139, no. 43).

16 [6] harmony of the heavenly spheres The Pythagorean view that in their revolutions the heavenly spheres cause a music which we cannot hear because the noise of the world drowns it out; for a summary and criticism, see Aristotle, *On the Heavens* (II, 9, 290b 12–291a 22), and cp. *Metaphysics* (I, 5, 985b 23–986a 7); Quintilian, *Institutes* I, x, 12. Rameau appealed to the Pythagorean tradition in support of his claim that harmony, as he understands it, is “natural”; see, e.g., *Démonstration du principe de l’harmonie* (1750) in *Complete Theoretical Writings of Jean Philippe Rameau*, edited by E. R. Jacobi (American Institute of Musicology, 1967–1972), vol. III, 157f., and *Nouvelles réflexions sur le principe sonore*, *ib.*, vol. IV, p. 213.

18 [1] songs of American savages One of which Rousseau included in his *Dictionnaire de Musique* under the heading “Songs of Canadian Savages”, OC V, 1190.

18 [3] they would have called the second *do re* a consonance Because *re* forms a perfect consonance with the unsounded *sol*, according to standard pitch relations. I am indebted to Mr. Robert Burns for this note.

18 [4] pathetic forms “Dramatic and theatrical musical form which tends to depict and to arouse great passions, especially suffering and sadness . . . True *pathos* resides in a passionate accent which is not determined by rules but which genius finds and the heart feels without its being possible for art to formulate any law regarding it” (*Dictionnaire de Musique*, “Pathétique”).

19 [2] Menallipides . . . Plutarch In the dialogue *On Music* traditionally attributed – and now believed to have been misattributed – to Plutarch (AD c. 46–c. 120), the fifth-century BC poet Menallipides and the early fourth-century BC poet Philoxenus are said to have broken with traditional musical practice. Indeed, Philoxenus’s play *Cyclopes* evidently created a sensation by calling for a sung solo by the Cyclops. The dialogue goes on to quote a speech from Pherecrates’s (fl. 440–420 BC) *Chiron*, in which Music tells the story of her fall from being poetry and music united, to being music “alone” (*De musica* 30, 1141c–1142a). Condillac, in contrast to Rousseau, speaking about this and similar texts, derides such an attachment to old ways (*Essay* pt. II, sec. 1, ch. 8, § 73, pp. 229f.). Plato, jealous of Homer and Euripides Plato’s Socrates, speaking of the traditional quarrel between poetry and philosophy, prefaces a criticism of Homer with the remark that while he has honored him since boyhood, he honors truth more (*Republic* x, 595 b–c); he had Socrates criticize Euripides (480–408 BC) by name earlier in the dialogue (*Republic* VIII, 568 a–b); according to tradition, Plato himself began by writing tragedies (Diogenes Laertius, *Lives* III, 6).

19 [4] The Emperor Julian, surnamed the Apostate (332–363), had been a general in Gaul; Starobinski refers to his *Misopogon* 337c, and to various contemporaries of Rousseau's who cite or paraphrase the remark.

19 [7] did not know the principle of an effect which they knew. Namely, why they found pleasant the chords which they did find pleasant. verbiage in Jean de Muris or Jehan des Murs (c. 1300–c. 1350); the encyclopedic compendium of medieval musical knowledge, the *Speculum musicae*, traditionally attributed to him, is now attributed to his somewhat older contemporary, Jacques de Liège (c. 1260–c. 1330). Giovanni Andrea Angelini, known as *Bontempi* (c. 1624–1705), composer, poet, musicologist, author of an *Historia musicae* (Perugia, 1695), which Rousseau read in 1737 and which first aroused his interest in the history and theory of music (*Conf.* VI, OC I, 246).

19 [7]* M. Tartini has confirmed Giuseppe Tartini (1692–1770), composer, violinist, and musical theorist whose works on harmony greatly influenced Rousseau.

19 [9] doubly the voice of nature I.e. the appropriate or “natural” imitation of spontaneous or natural sounds and utterings; see especially this *Essay* 14 [7].

20 [1] Societies have assumed their final forms or “final form”; the ms. reads *dernière formes*.

20 [3] Among the ancients . . . in a public square Also, SC III 15 [9]; so, too, Condillac, *Essay* pt. II, ch. 3, §§ 28f.; by contrast, Aristotle, discussing the proper size for a polis, remarks that if it is too large, “who can give it orders unless he has Stentor's voice?” (*Politics* VIII, 4, 1326b 6f., cp. V, 5, 1305a 8–15). M. d'Alembert published an *Elements of Music . . . according to the Principles of M. Rameau* in 1752.

20 [5]* *Remarques sur la gram[maire] génér[ale] et raison[née]* referred to in Editorial Note to this *Essay*, 5 [12] above.

IDEA OF THE METHOD IN THE COMPOSITION OF A BOOK (pages 300–304)

Charly Guyot, the editor of the OC edition of this essay, thinks it was written about 1745: OC II, pp. ci, 1933. The manuscript is at Harvard. [6] synthesis . . . analysis: Rousseau's brief description of the two methods closely follows the language of the so-called *Port Royal Logic* (Antoine Arnauld and Pierre Nicole, *Logic, or the Art of Thinking*, translated and edited by Jill Vance Booker, CUP, Cambridge, 1996; first edition, 1662), Part IV, chapter II, near the beginning; his illustration of these methods in terms of a genealogy corresponds to the example in § 4 of that chapter; the parallel has also been noted by Goldschmidt,